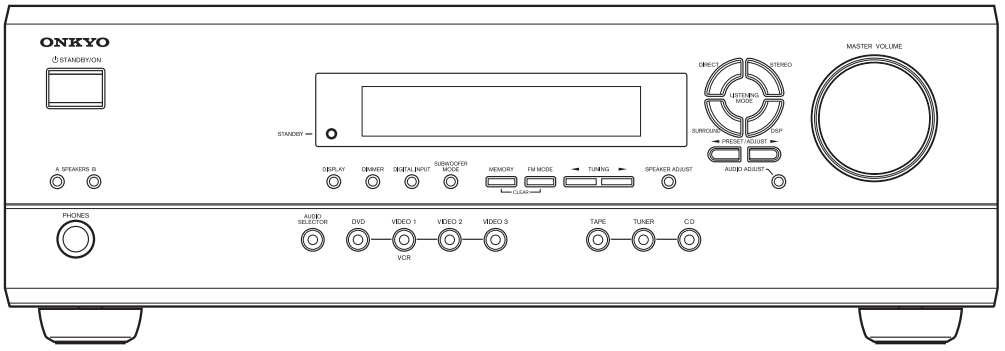
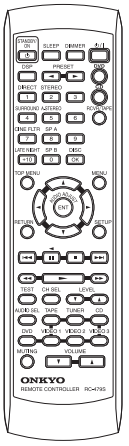
Ref. No. 3817
082004

ONKYO SERVICE MANUAL

AV RECEIVER
MODEL HT-R8230





RC-479S

Silver model

SMDD	120V AC, 60Hz

SAFETY-RELATED COMPONENT WARNING!!

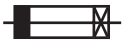
COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

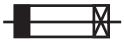
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SERVICE PROCEDURES

1. Replacing the fuses

 This symbol located near the fuse indicates that the fuse used is show operating type, For continued protection against fire hazard, replace with same type fuse, For fuse rating, refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est apposre.

REF. NO.	DESCRIPTION	PART NO.	REMARKS
F6901	8A-UL	252198	!
F6901 or	8A-T/UL-ST2	252261	!
F6902	8A-UL	252198	!
F6902 or	8A-T/UL-ST2	252261	!
F901	8A-UL	252198	!
F901 or	8A-T/UL-ST2	252261	!
F903	5A-UL/T-237	252164	!
F903 or	5A-T/UL-ST2	252258	!

2. Safety-check out

(Only U.S.A. model)
After correcting the original service problem perform the following safety check before releasing the set to the customer
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.
Specifications: More than 10Mohm at 500V

3. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical sauce results in accident which causes the specified operations and functions to operate abnormally.
To perform a result, please follow the procedure below.

1. Press and the hold down the VIDEO 1 button , then press the STANDBY/ON button when the unit is Power ON.
2. After " *Clear* " is displayed, the preset memory and each mode stored in the memory, are initialized and will return to the factory settings.

4. How to check version of microprocessor?

Main microprocessor Q7008.

1. Press and the hold down the DISPLAY button , then press the STANDBY/ON button when the unit is Power ON.
   Version is displayed on FL display only for 3 seconds.

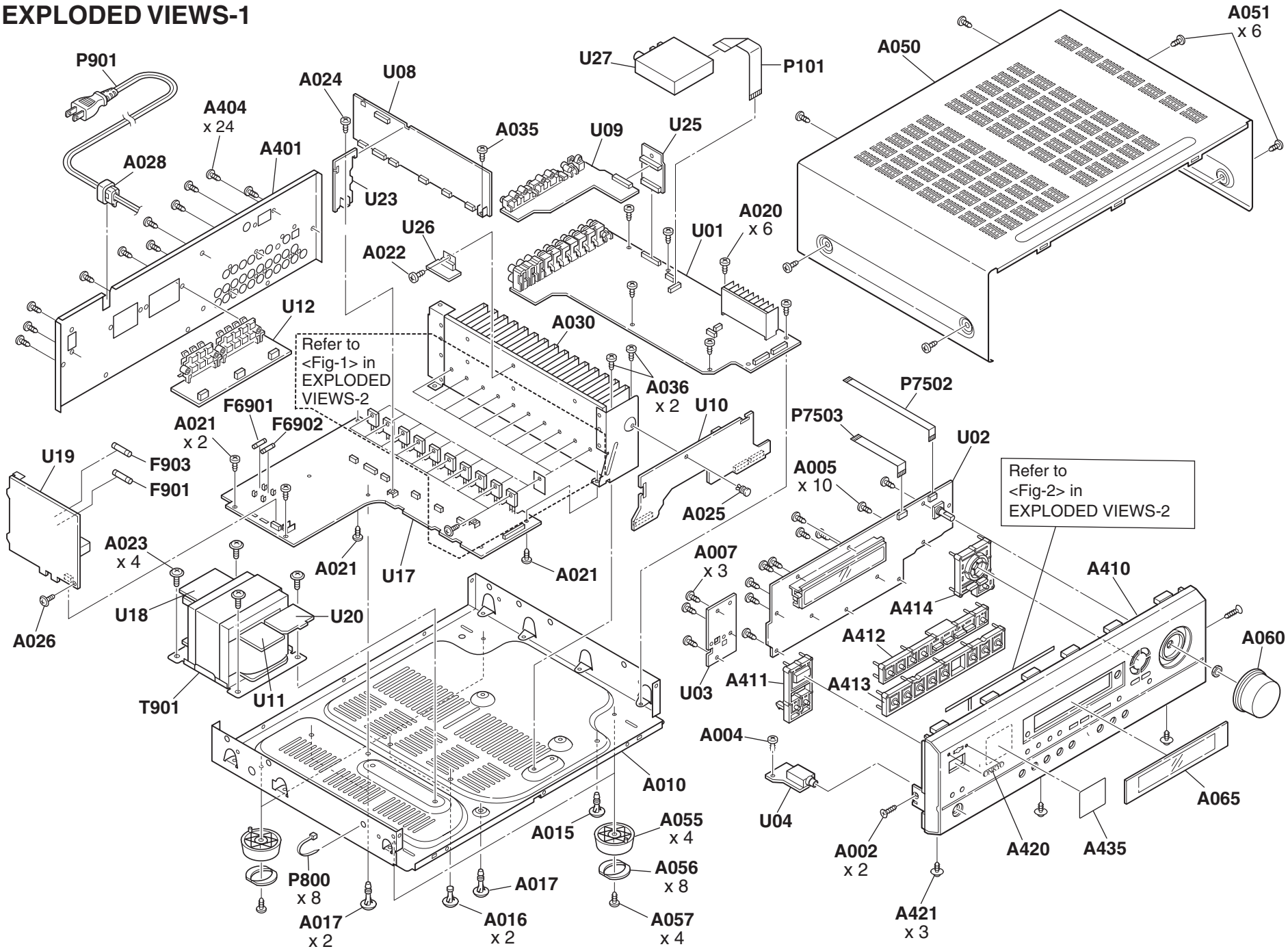
   ex. | *Version 04212a* |

2. Press the STANDBY/ON button to Power Off.

5. Memory Preservation

This unit does not require memory preservation batteries.
A built-in memory power backup system preserves the contents of memory during power failures and even when the power cord is unplugged.
The power cord must be plugged in order to charge the backup system.
The memory preservation period after the unit has been turned off varies depending on climate and placement of the unit. On average, memory contents are protected over a period of a few weeks after the time the unit has been turned off.
This period is shorter when the unit is exposed to a very humid climate.

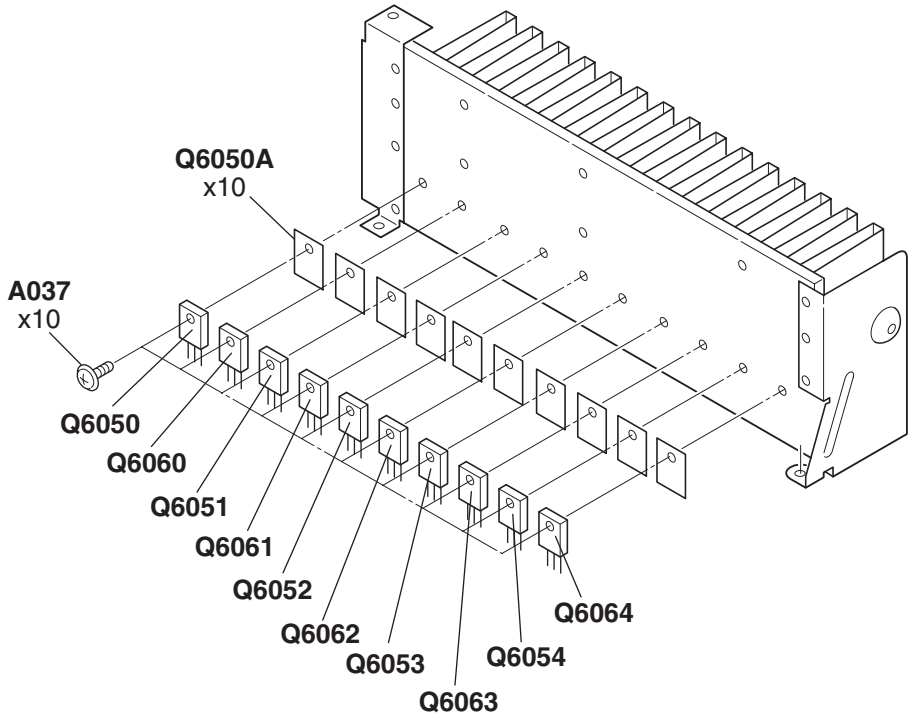
EXPLODED VIEWS-1



HT-R8230

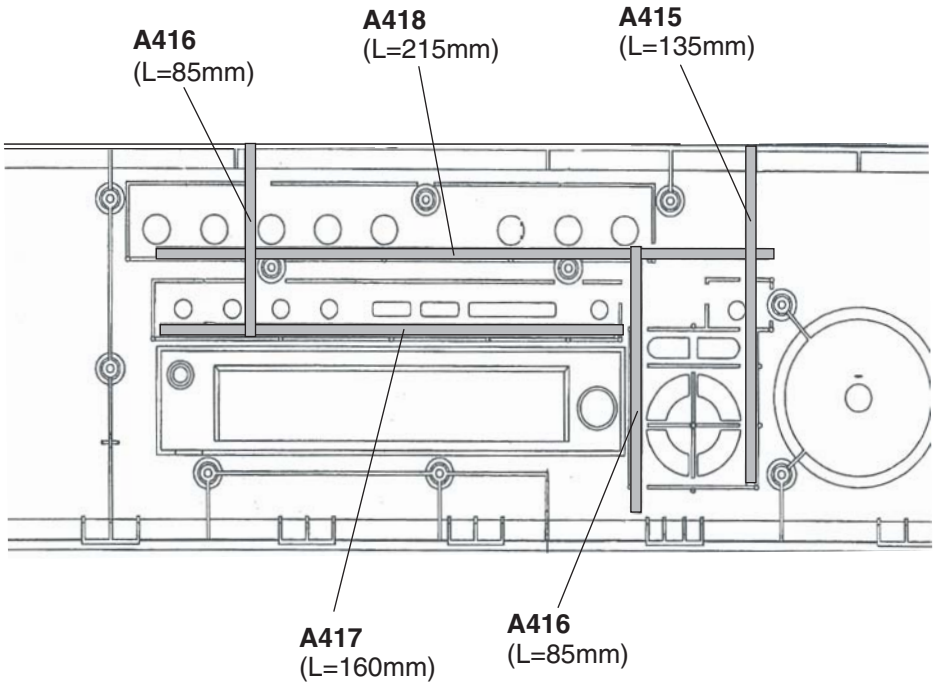
EXPLODED VIEWS-2

<Fig-1>



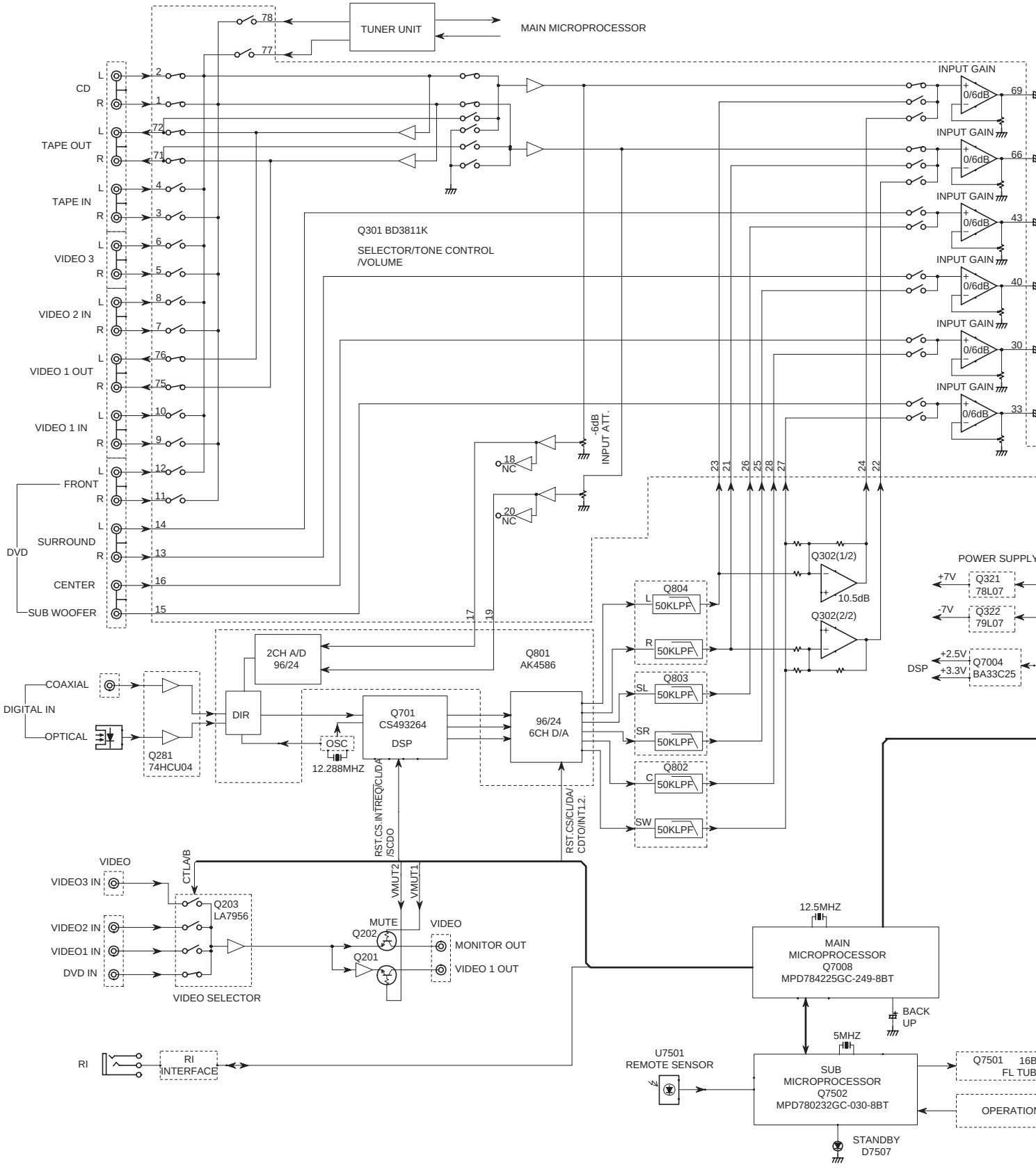
<Fig-2>

FRONT PANEL INSIDE VIEW

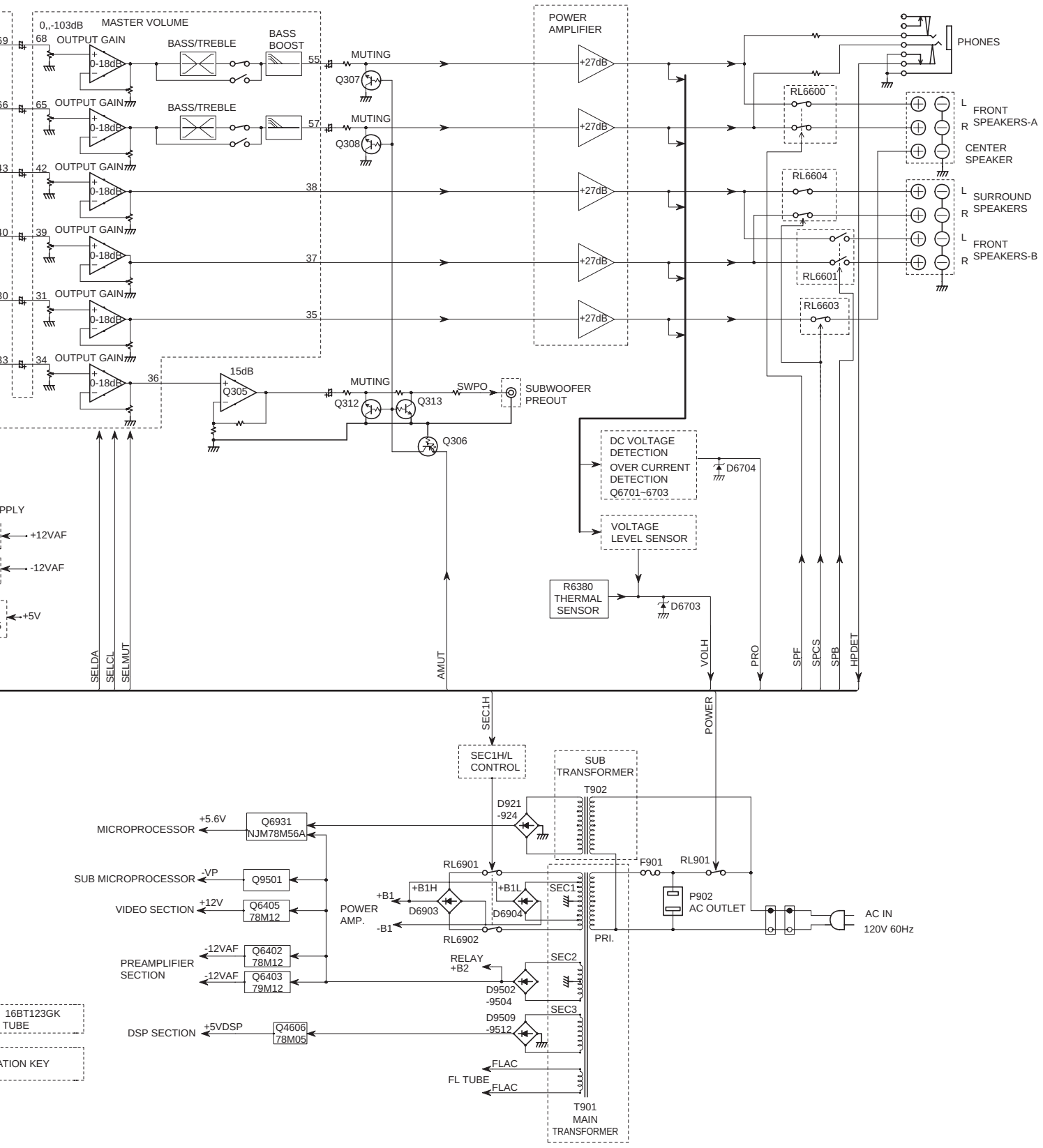


HT-R8230

BLOCK DIAGRAM

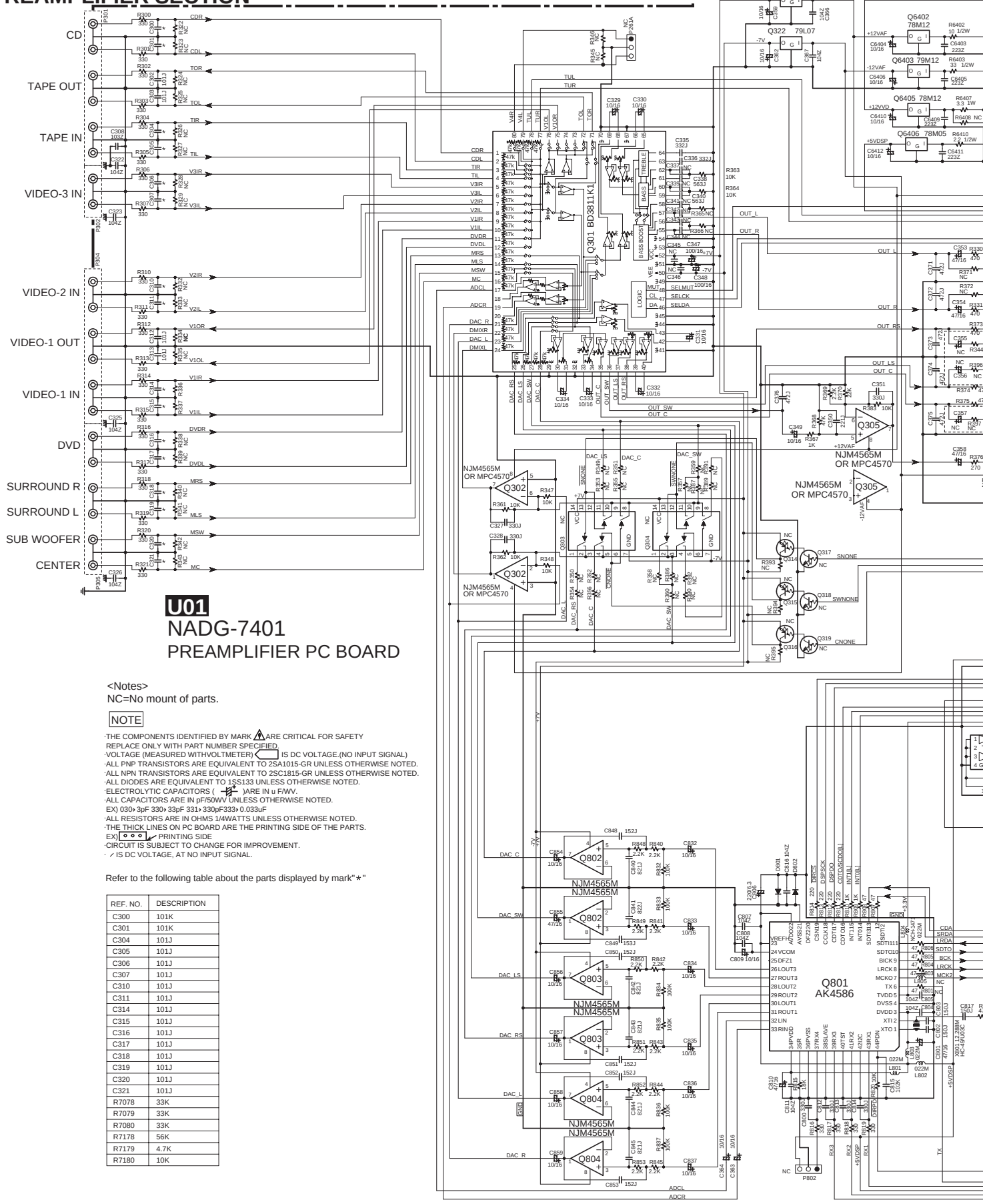


E F G H


MASTER VOLUME
0,,-103dB
OUTPUT GAIN
0-18dB
BASS/TREBLE
BASS BOOST
MUTING
Q307
Q308
POWER AMPLIFIER
+27dB
PHONES
RL6600
RL6604
RL6601
RL6603
L
R
FRONT SPEAKERS-A
CENTER SPEAKER
SURROUND SPEAKERS
FRONT SPEAKERS-B
15dB
Q305
Q312
Q313
Q306
SWPO
SUBWOOFER PREOUT
DC VOLTAGE DETECTION
OVER CURRENT DETECTION
Q6701~6703
D6704
VOLTAGE LEVEL SENSOR
R6380 THERMAL SENSOR
D6703
+12VAF
-12VAF
+5V
SELDA
SELCL
SELMUT
AMUT
VOLH
PRO
SPF
SPCS
SPB
HPDET
SEC1H
POWER
SEC1H/L CONTROL
SUB TRANSFORMER
T902
D921
-924
MICROPROCESSOR
+5.6V
Q6931
NJM78M56A
SUB MICROPROCESSOR
-VP
Q9501
VIDEO SECTION
+12V
Q6405
78M12
PREAMPLIFIER SECTION
-12VAF
Q6402
78M12
-12VAF
Q6403
79M12
DSP SECTION
+5VDSP
Q4606
78M05
RL6901
RL6902
F901
RL901
P902
AC OUTLET
AC IN
120V 60Hz
POWER AMP.
+B1
-B1
+B1H
+B1L
D6903
D6904
SEC1
PRI.
RELAY
+B2
D9502
-9504
SEC2
D9509
-9512
SEC3
FLAC
FL TUBE
T901
MAIN TRANSFORMER
16BT123GK
TUBE
ATION KEY

SCHEMATIC DIAGRAMS-1

PREAMPLIFIER SECTION



U01

NADG-7401

PREAMPLIFIER PC BOARD

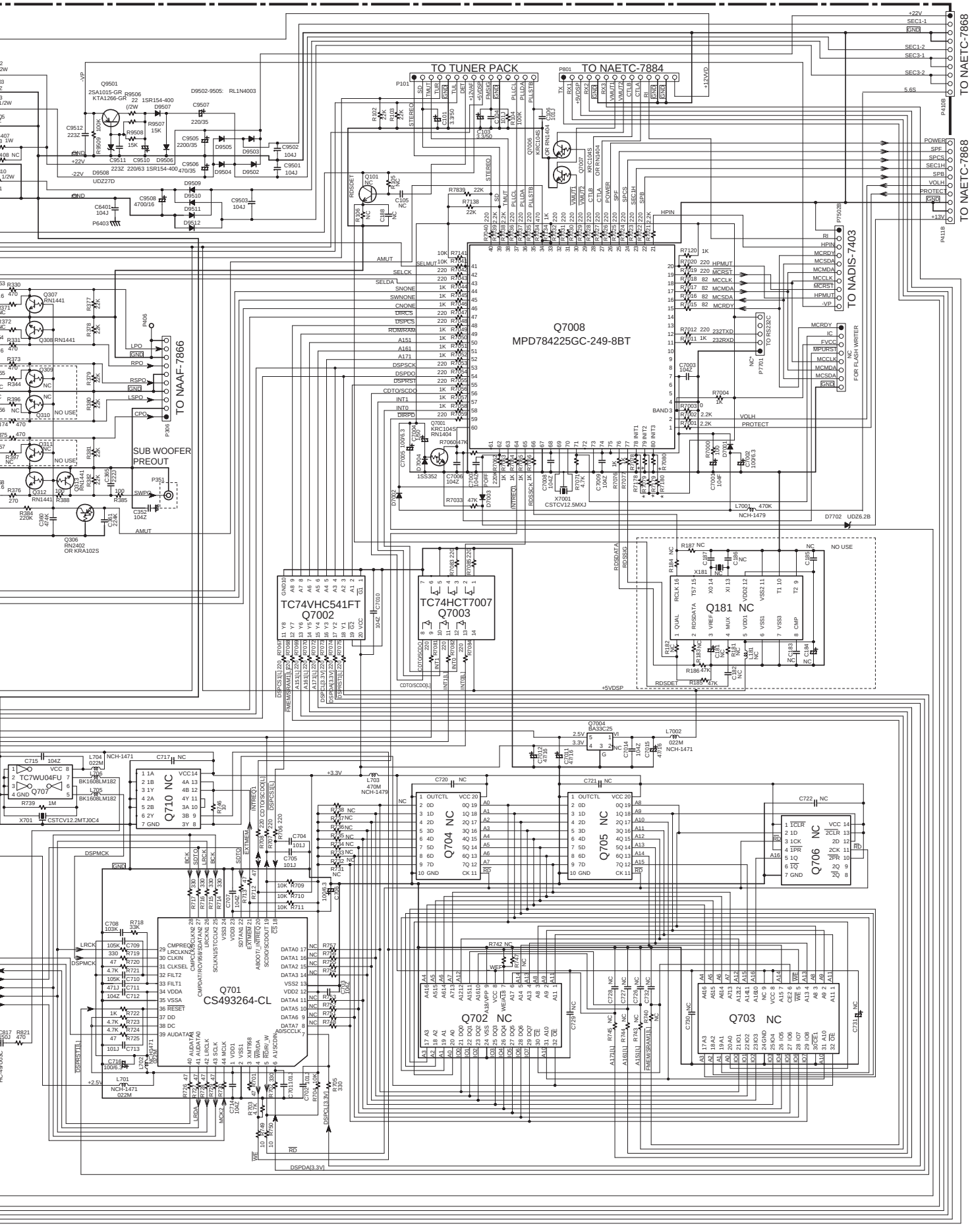
<Notes>
NC=No mount of parts.

NOTE

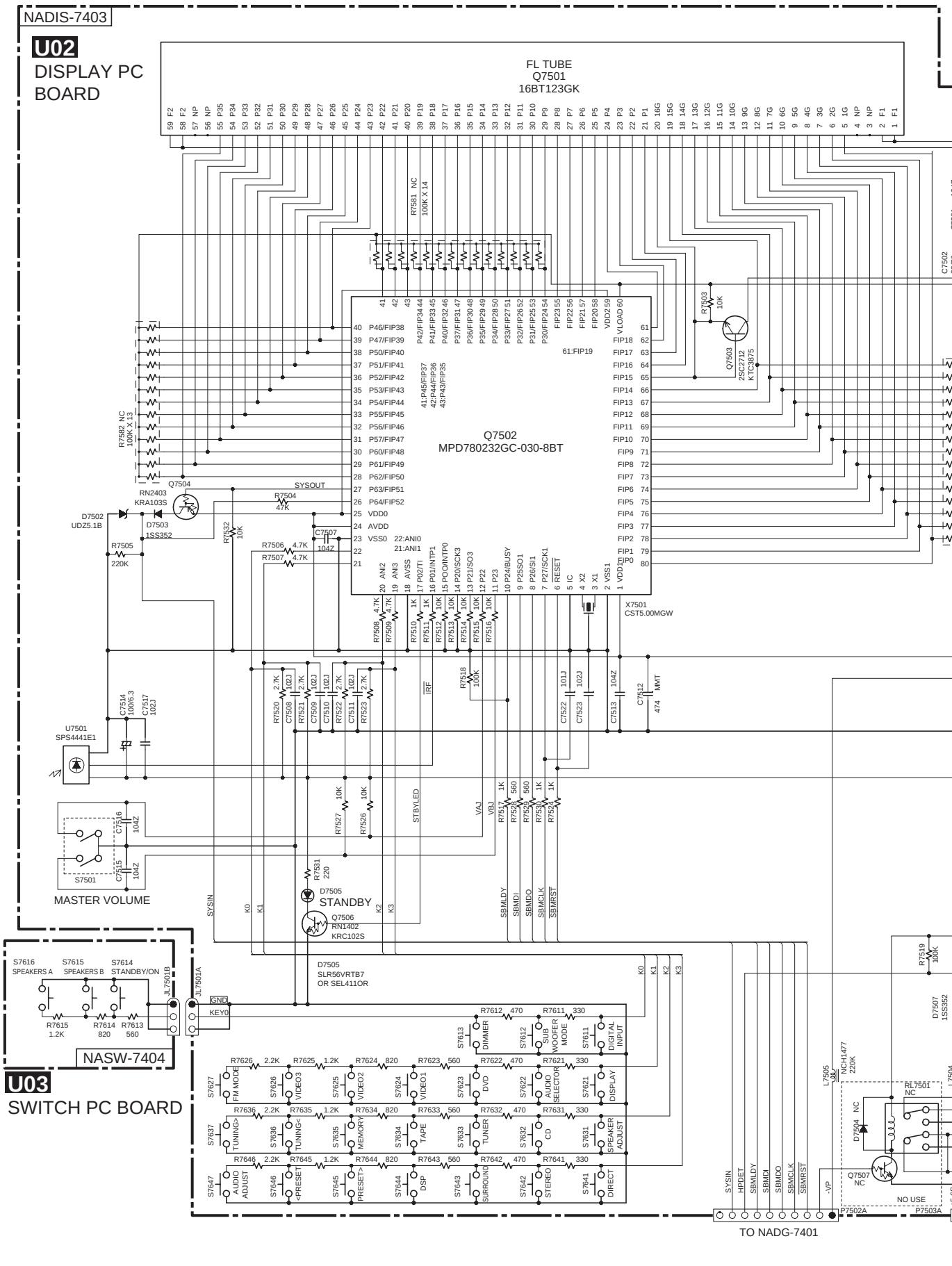
·THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY
REPLACE ONLY WITH PART NUMBER SPECIFIED.
·VOLTAGE (MEASURED WITHVOLTMETER) ⟨ ⟩ IS DC VOLTAGE.(NO INPUT SIGNAL)
·ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
·ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
·ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
·ELECTROLYTIC CAPACITORS (⊣⊢)ARE IN u F/WV.
·ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030› 3pF 330› 33pF 331› 330pF333› 0.033uF
·ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
·THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) ⬭ PRINTING SIDE
·CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
· ⟋ IS DC VOLTAGE, AT NO INPUT SIGNAL.

Refer to the following table about the parts displayed by mark"＊"

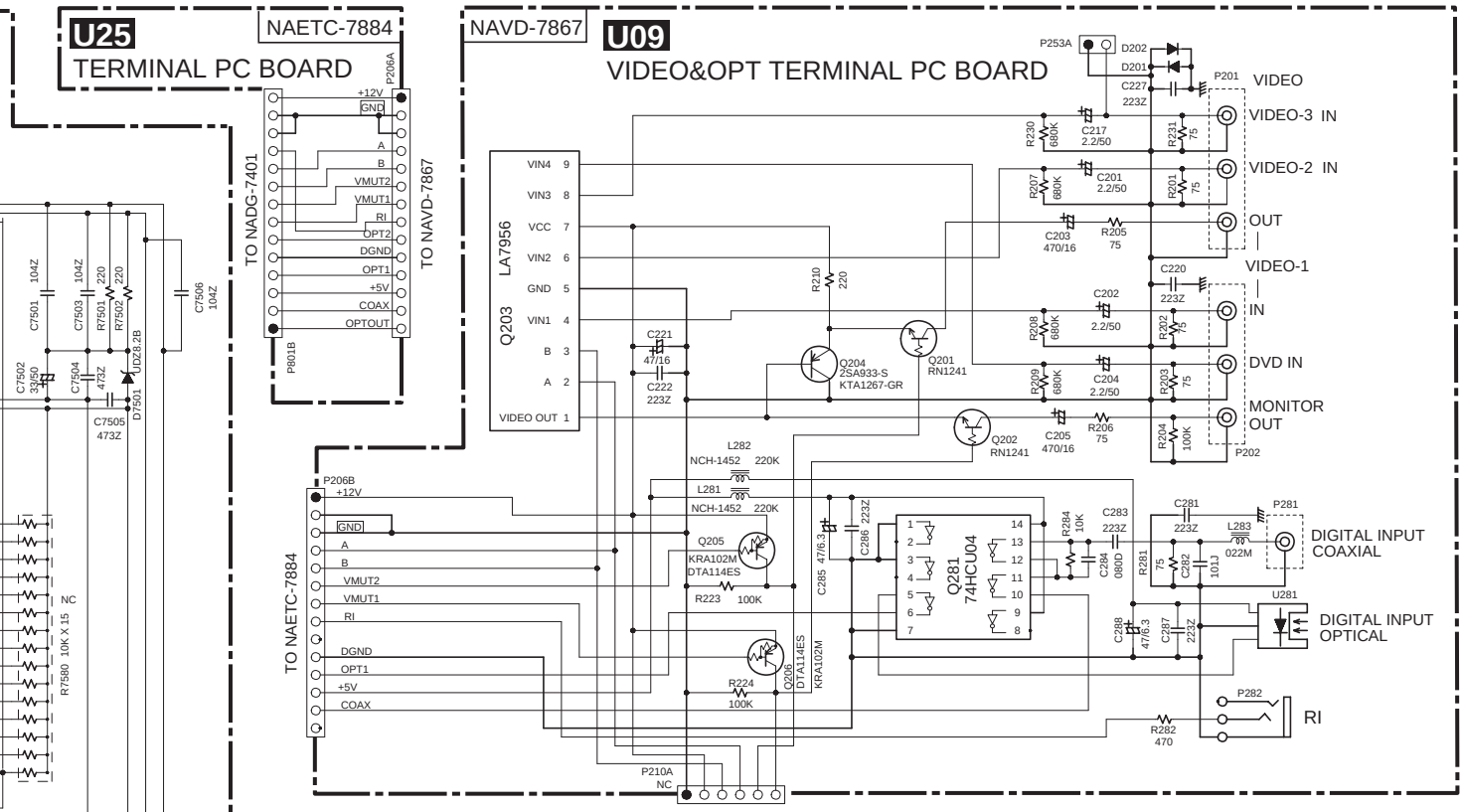
REF. NO.	DESCRIPTION
C300	101K
C301	101K
C304	101J
C305	101J
C306	101J
C307	101J
C310	101J
C311	101J
C314	101J
C315	101J
C316	101J
C317	101J
C318	101J
C319	101J
C320	101J
C321	101J
R7078	33K
R7079	33K
R7080	33K
R7178	56K
R7179	4.7K
R7180	10K

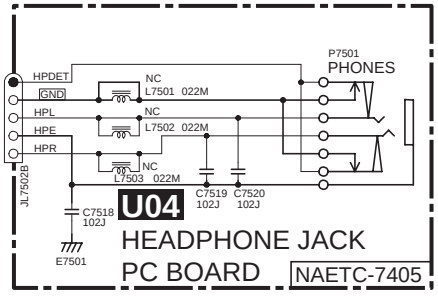

E
F
G
H
TO TUNER PACK
TO NAETC-7884
TO NAETC-7868
TO NAETC-7868
TO NADIS-7403
TO NAAF-7866
SUB WOOFER PREOUT
Q7008
MPD784225GC-249-8BT
TC74VHC541FT
Q7002
TC74HCT7007
Q7003
Q710 NC
Q704 NC
Q705 NC
Q706 NC
Q701
CS493264-CL
Q702 NC
Q703 NC
Q181 NC
Q707
TC7WU04FU
Q7004
BA33C25
X701
CSTCV12.2MTJ0C4
X7001
CSTCV12.5MXJ
FOR FLASH WRITER
TO RS232C
NO USE
+22V
+12VD
+5VDSP
+3.3V
+2.5V
-VP
-22V
+13V
5.6S
GND

SCHEMATIC DIAGRAMS-2
DISPLAY & VIDEO SECTION



E F G H





<Notes>
NC=No mount of parts.

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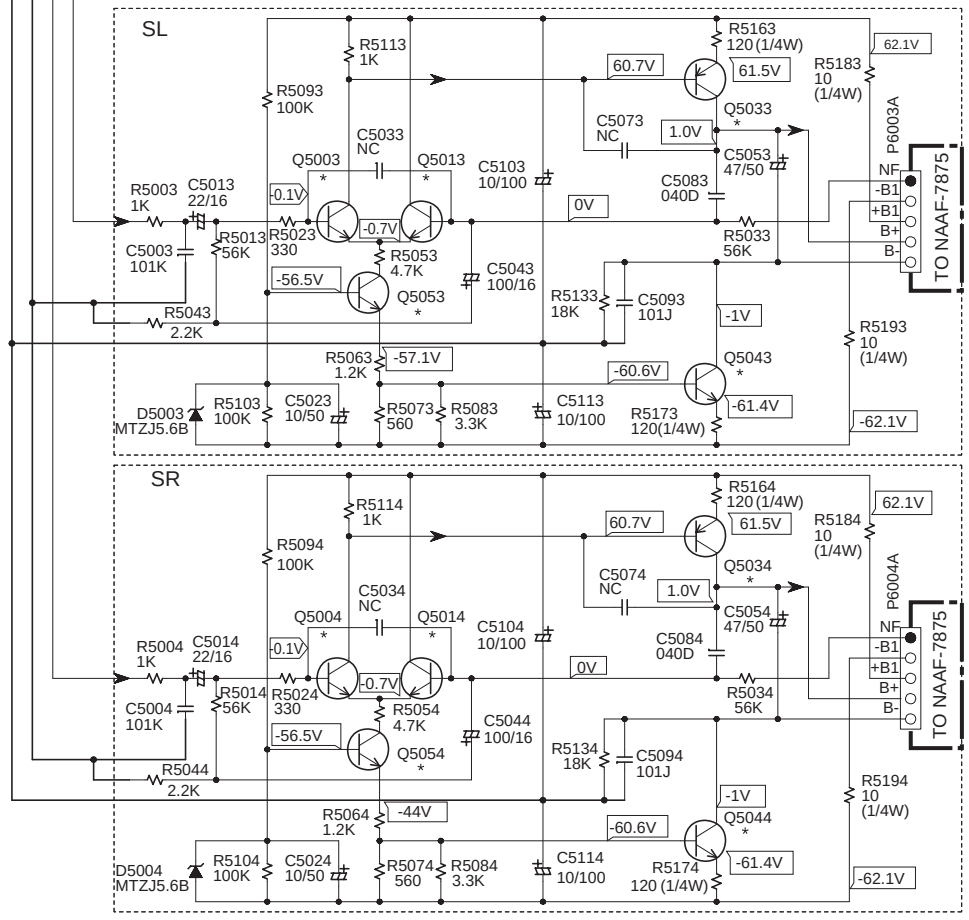
·ELECTROLYTIC CAPACITORS ( ) ARE IN u F/WV.
·ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030› 3pF 330› 33pF 331› 330pF333› 0.033uF
·ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
·THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) PRINTING SIDE
·CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
· ⟋ IS DC VOLTAGE, AT NO INPUT SIGNAL.

SCHEMATIC DIAGRAMS-3
DRIVER AMPLIFIER SECTION

NAAF-7866

U08
DRIVER
AMPLIFIER
PC BOARD



NOTE

·THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY
REPLACE ONLY WITH PART NUMBER SPECIFIED.
·VOLTAGE (MEASURED WITHVOLTMETER) ⟨ ▭ IS DC VOLTAGE.(NO INPUT SIGNAL)
·ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
·ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
·ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
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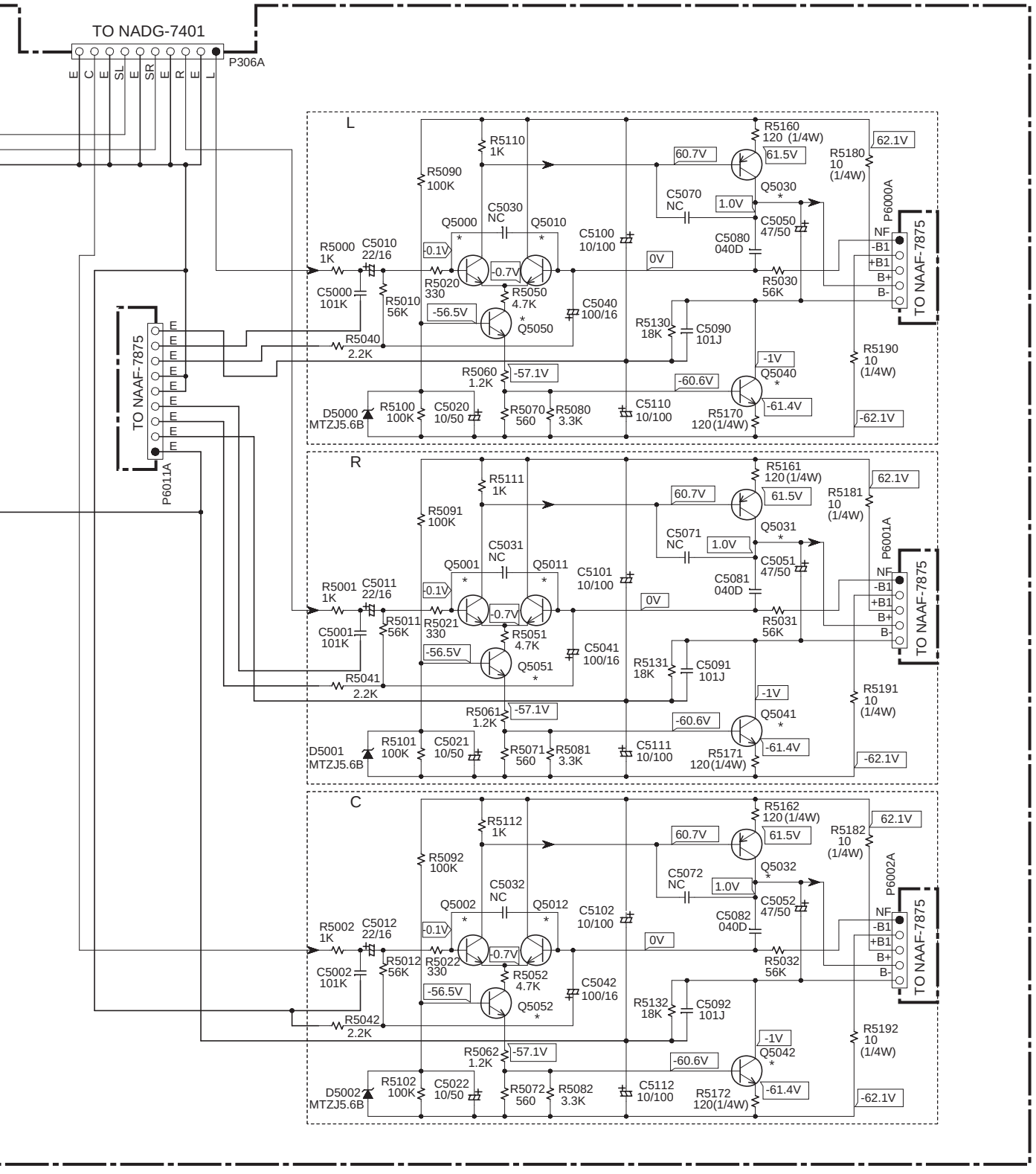
EX) ▭ ↙ PRINTING SIDE
·CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
· ⟋ IS DC VOLTAGE, AT NO INPUT SIGNAL.

<Notes>
NC=No mount of parts.

Refer to the following table about the parts displayed by mark" ⋆"

REF. NO.	DESCRIPTION
Q5000-04,Q5010-14	KTC3200-BL OR 2SC1775A-E,F OR 2SC1845-E
Q5030-34	KTA1024-Y,O OR 2SA949-Y,O
Q5040-44	KTC3206-Y,O OR 2SC2229-Y,O
Q5050-54	KTC3200-BL,GR OR 2SC1775A-E,F OR 2SC1845-E,F

E F G H


TO NADG-7401
P306A
E C E SL E SR E R E L
L
R
C
R5110 1K
R5090 100K
C5030 NC
Q5000
Q5010
R5000 1K
C5010 22/16
C5000 101K
R5010 56K
R5020 330
R5050 4.7K
Q5050
R5040 2.2K
C5040 100/16
C5100 10/100
R5130 18K
C5090 101J
R5060 1.2K
D5000 MTZJ5.6B
R5100 100K
C5020 10/50
R5070 560
R5080 3.3K
C5110 10/100
R5160 120 (1/4W)
R5180 10 (1/4W)
Q5030
C5070 NC
C5050 47/50
C5080 040D
R5030 56K
R5190 10 (1/4W)
Q5040
R5170 120(1/4W)
60.7V
61.5V
62.1V
1.0V
0V
-0.1V
-0.7V
-56.5V
-57.1V
-60.6V
-61.4V
-62.1V
-1V
P6000A
NF
-B1
+B1
B+
B-
TO NAAF-7875
P6011A
R5111 1K
R5091 100K
C5031 NC
Q5001
Q5011
R5001 1K
C5011 22/16
C5001 101K
R5011 56K
R5021 330
R5051 4.7K
Q5051
R5041 2.2K
C5041 100/16
C5101 10/100
R5131 18K
C5091 101J
R5061 1.2K
D5001 MTZJ5.6B
R5101 100K
C5021 10/50
R5071 560
R5081 3.3K
C5111 10/100
R5161 120 (1/4W)
R5181 10 (1/4W)
Q5031
C5071 NC
C5051 47/50
C5081 040D
R5031 56K
R5191 10 (1/4W)
Q5041
R5171 120(1/4W)
P6001A
R5112 1K
R5092 100K
C5032 NC
Q5002
Q5012
R5002 1K
C5012 22/16
C5002 101K
R5012 56K
R5022 330
R5052 4.7K
Q5052
R5042 2.2K
C5042 100/16
C5102 10/100
R5132 18K
C5092 101J
R5062 1.2K
D5002 MTZJ5.6B
R5102 100K
C5022 10/50
R5072 560
R5082 3.3K
C5112 10/100
R5162 120 (1/4W)
R5182 10 (1/4W)
Q5032
C5072 NC
C5052 47/50
C5082 040D
R5032 56K
R5192 10 (1/4W)
Q5042
R5172 120(1/4W)
P6002A

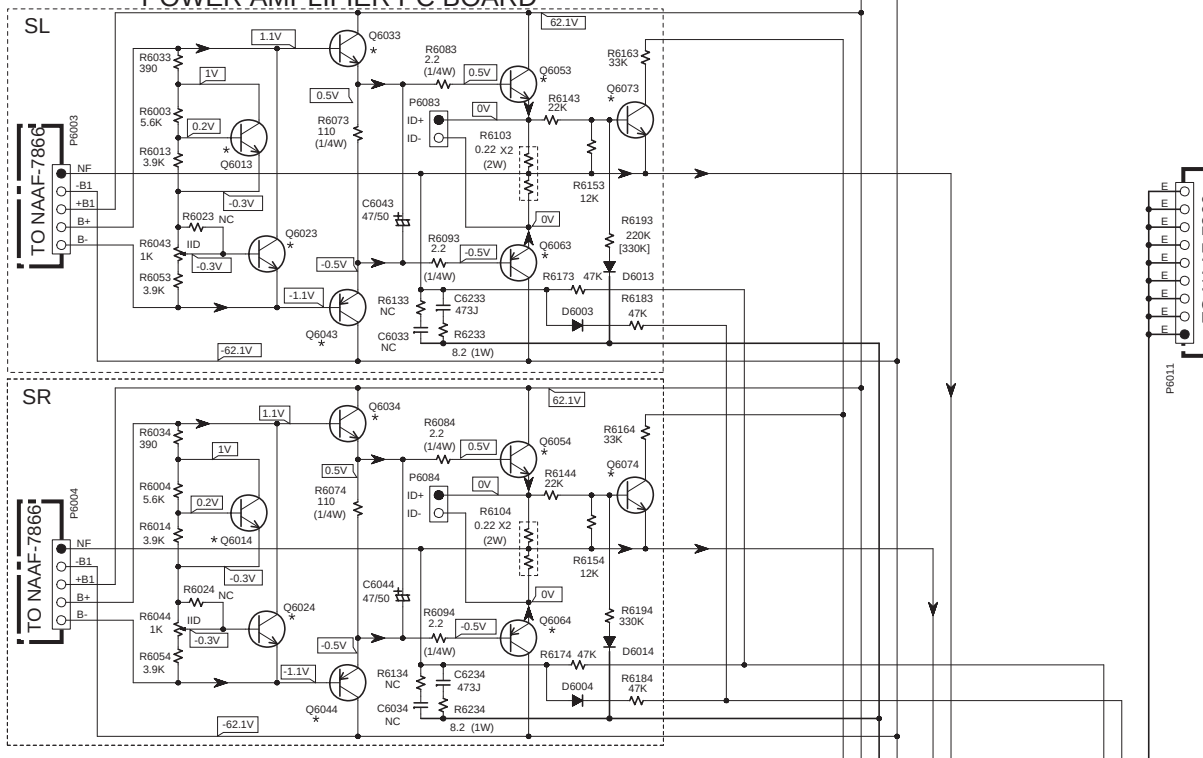
A B C D

1 2 3 4 5

SCHEMATIC DIAGRAMS-4
POWER AMPLIFIER SECTION

NAAF-7875 **U17**

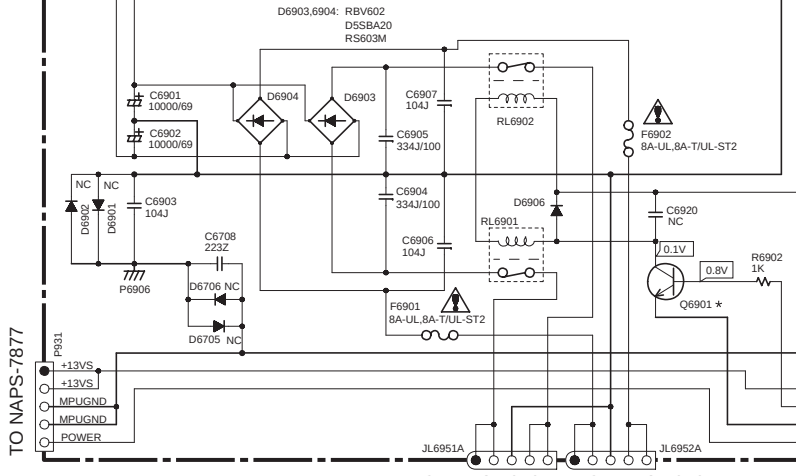
POWER AMPLIFIER PC BOARD



<Notes>
NC=No mount of parts.

Refer to the following table about the parts displayed by mark"*"

REF. NO.	DESCRIPTION
Q6010-6014	2SC1740S-R,S
Q6020-6024	2SC1740S-R,S
Q6030-6031	KTD2061-Y OR 2SC5171
Q6040-6041	KTB1369-Y OR 2SA1930
Q6032-6034	KTD2061-Y OR 2SC5171
Q6042-6044	KTB1369-Y OR 2SA1930
Q6050-6051	2SC5242-R,O OR MN150S-Y,P,O
Q6052-6054	MN130S-Y,P,O OR 2SC5242-O,R
Q6060-6061	2SA1962-R,O OR MP150S-Y,P,O
Q6062-6064	MP130S-Y,P,O OR 2SA1962-O,R
Q6070-6074	2SC2631-R,S
Q6601-6603,Q6901	KTC3199-GR,2SC1740S-R,S,2SC2458-GR
Q6701,6702	KTC3200-BL,GR OR 2SC1775A-E,F OR 2SC1845-E,F
Q6703	KTA1268-GR,BL OR 2SA992-E,F
Q6303	KTA1267-GR OR 2SA933S-R,S



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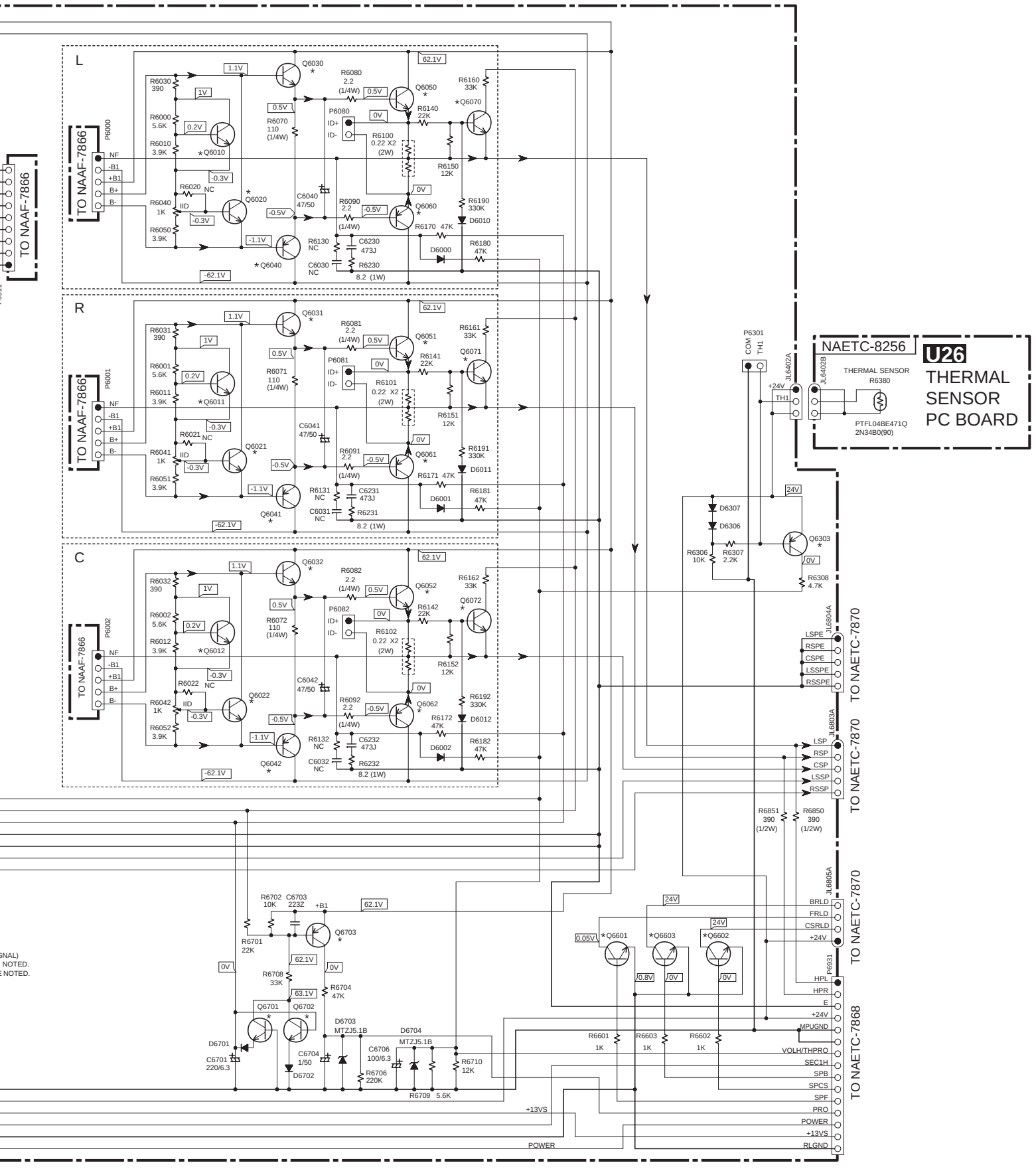
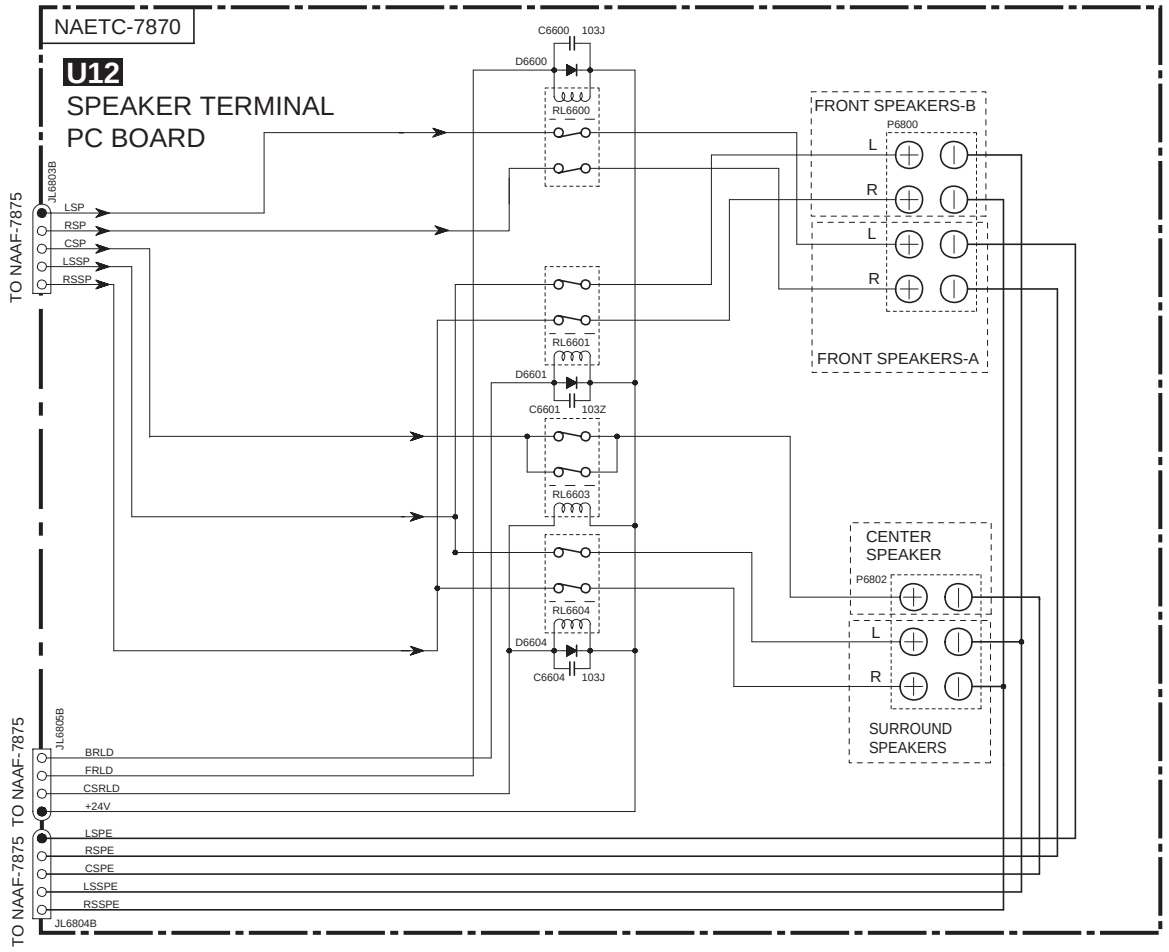
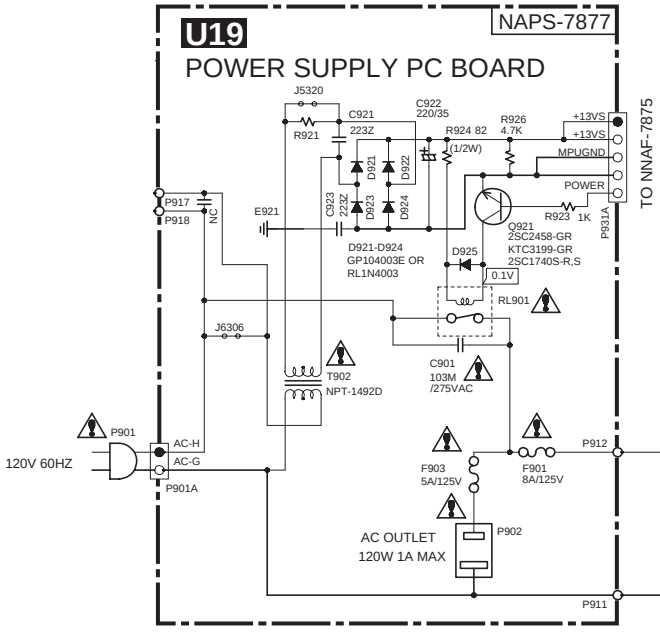
·ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTE
·ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
·ELECTROLYTIC CAPACITORS (⊣⊢)ARE IN u F/WV.
·ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030› 3pF 330› 33pF 331› 330pF333› 0.033uF
·ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
·THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) ⊙⊙⊙ PRINTING SIDE
·CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
· ⟋ IS DC VOLTAGE, AT NO INPUT SIGNAL.

E F G H

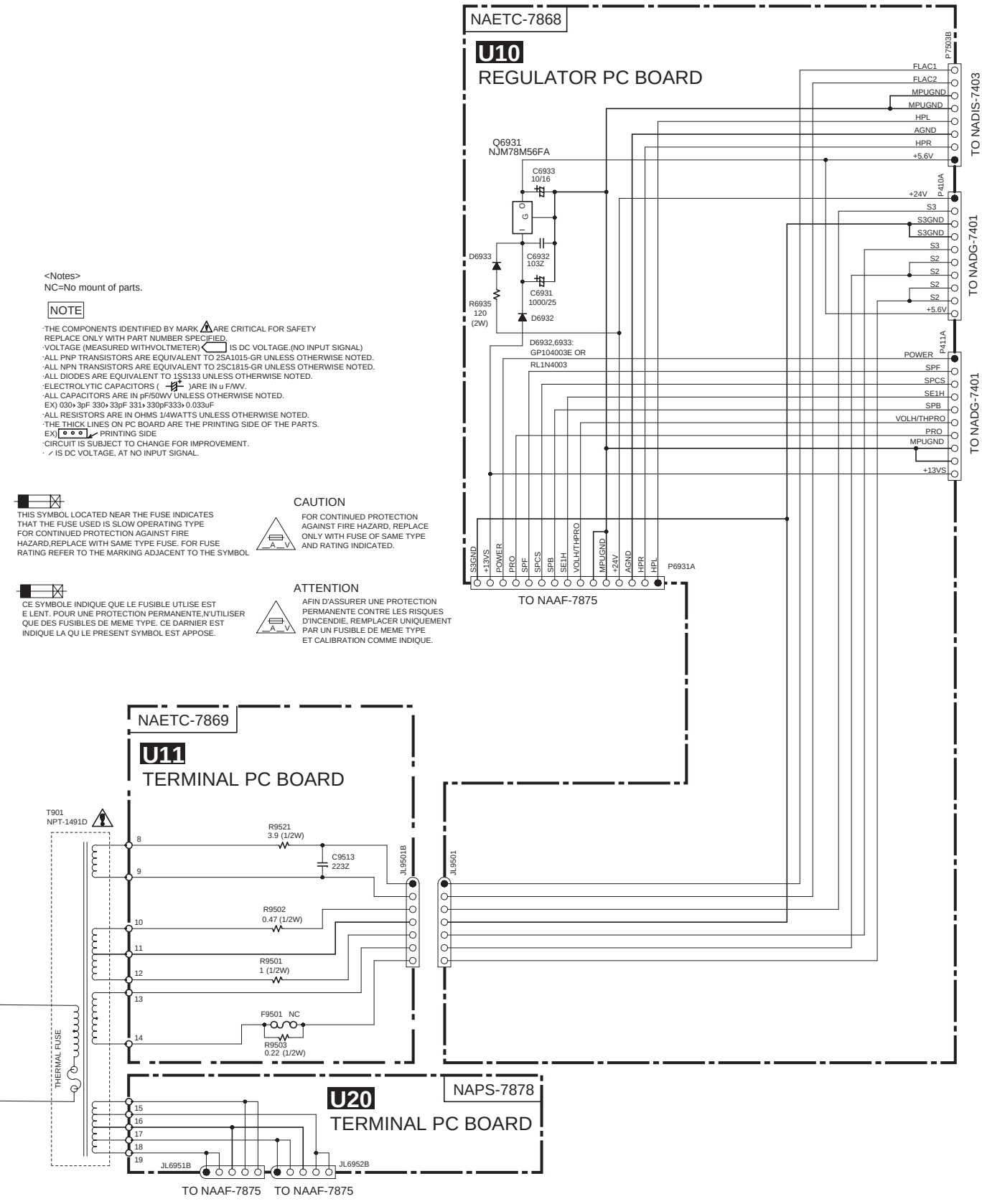

L
R
C
TO NAAF-7866
P6000
P6001
P6002
NF
-B1
+B1
B+
B-
Q6030
Q6031
Q6032
Q6010
Q6011
Q6012
Q6020
Q6021
Q6022
Q6040
Q6041
Q6042
Q6050
Q6051
Q6052
Q6060
Q6061
Q6062
Q6070
Q6071
Q6072
R6030 390
R6031 390
R6032 390
R6000 5.6K
R6001 5.6K
R6002 5.6K
R6010 3.9K
R6011 3.9K
R6012 3.9K
R6040 1K
R6041 1K
R6042 1K
R6050 3.9K
R6051 3.9K
R6052 3.9K
R6020 NC
R6021 NC
R6022 NC
IID
R6070 110 (1/4W)
R6071 110 (1/4W)
R6072 110 (1/4W)
R6080 2.2 (1/4W)
R6081 2.2 (1/4W)
R6082 2.2 (1/4W)
R6090 2.2 (1/4W)
R6091 2.2 (1/4W)
R6092 2.2 (1/4W)
P6080
P6081
P6082
ID+
ID-
R6100 0.22 X2 (2W)
R6101 0.22 X2 (2W)
R6102 0.22 X2 (2W)
R6130 NC
R6131 NC
R6132 NC
C6030 NC
C6031 NC
C6032 NC
C6040 47/50
C6041 47/50
C6042 47/50
C6230 473J
C6231 473J
C6232 473J
R6230 8.2 (1W)
R6231 8.2 (1W)
R6232 8.2 (1W)
R6140 22K
R6141 22K
R6142 22K
R6150 12K
R6151 12K
R6152 12K
R6160 33K
R6161 33K
R6162 33K
R6170 47K
R6171 47K
R6172 47K
R6180 47K
R6181 47K
R6182 47K
R6190 330K
R6191 330K
R6192 330K
D6000
D6001
D6002
D6010
D6011
D6012
1.1V
1V
0.5V
0.2V
0V
-0.3V
-0.5V
-1.1V
-62.1V
62.1V
P6301
COM
TH1
JL6402A
JL6402B
+24V
THERMAL SENSOR
R6380
PTFL04BE471Q
2N34B0(90)
NAETC-8256
U26
THERMAL SENSOR PC BOARD
D6307
D6306
R6306 10K
R6307 2.2K
Q6303
R6308 4.7K
24V
JL6804A
LSPE
RSPE
CSPE
LSSPE
RSSPE
TO NAETC-7870
JL6803A
LSP
RSP
CSP
LSSP
RSSP
R6851 390 (1/2W)
R6850 390 (1/2W)
JL6805A
BRLD
FRLD
CSRLD
+24V
P6931
HPL
HPR
E
+24V
MPUGND
VOLH/THPRO
SEC1H
SPB
SPCS
SPF
PRO
POWER
+13VS
RLGND
TO NAETC-7868
R6702 10K
C6703 223Z
+B1
Q6703
R6701 22K
R6708 33K
R6704 47K
63.1V
Q6701
Q6702
D6703 MTZJ5.1B
D6704 MTZJ5.1B
D6701
C6701 220/6.3
C6704 1/50
D6702
C6706 100/6.3
R6706 220K
R6709 5.6K
R6710 12K
Q6601
Q6603
Q6602
0.05V
0.8V
R6601 1K
R6603 1K
R6602 1K
+13VS
POWER

SCHEMATIC DIAGRAM-5
SPEAKER TERMINAL & POWER SUPPLY SECTION





E F G H



<Notes>
NC=No mount of parts.

NOTE

·THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY
REPLACE ONLY WITH PART NUMBER SPECIFIED.
·VOLTAGE (MEASURED WITHVOLTMETER) ⟨ IS DC VOLTAGE.(NO INPUT SIGNAL)
·ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
·ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
·ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
·ELECTROLYTIC CAPACITORS (⏚)ARE IN u F/WV.
·ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030› 3pF 330› 33pF 331› 330pF333› 0.033uF
·ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
·THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) ⊙⊙⊙ PRINTING SIDE
·CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
· ⟋ IS DC VOLTAGE, AT NO INPUT SIGNAL.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

CAUTION

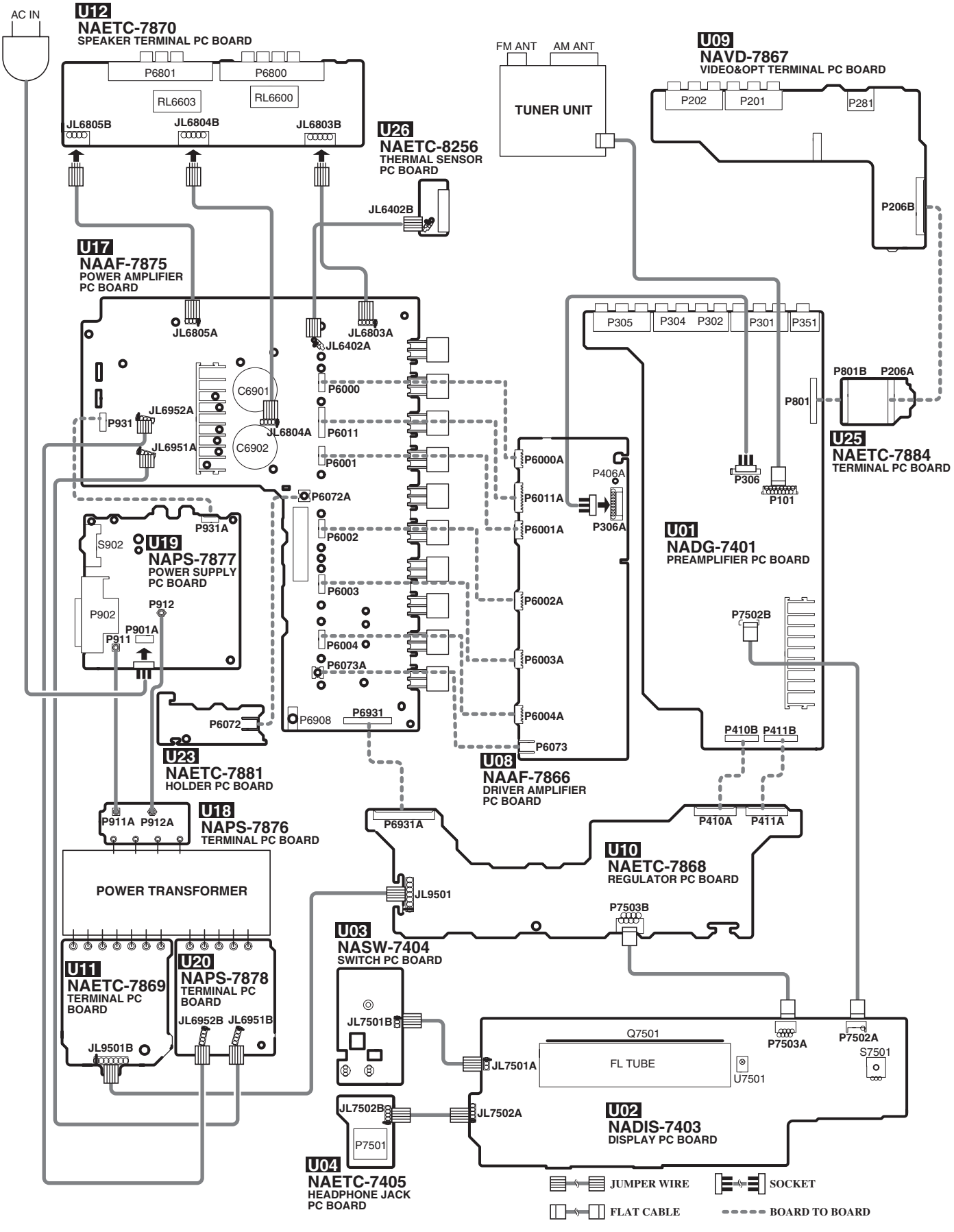
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST E LENT. POUR UNE PROTECTION PERMANENTE,N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

ATTENTION

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

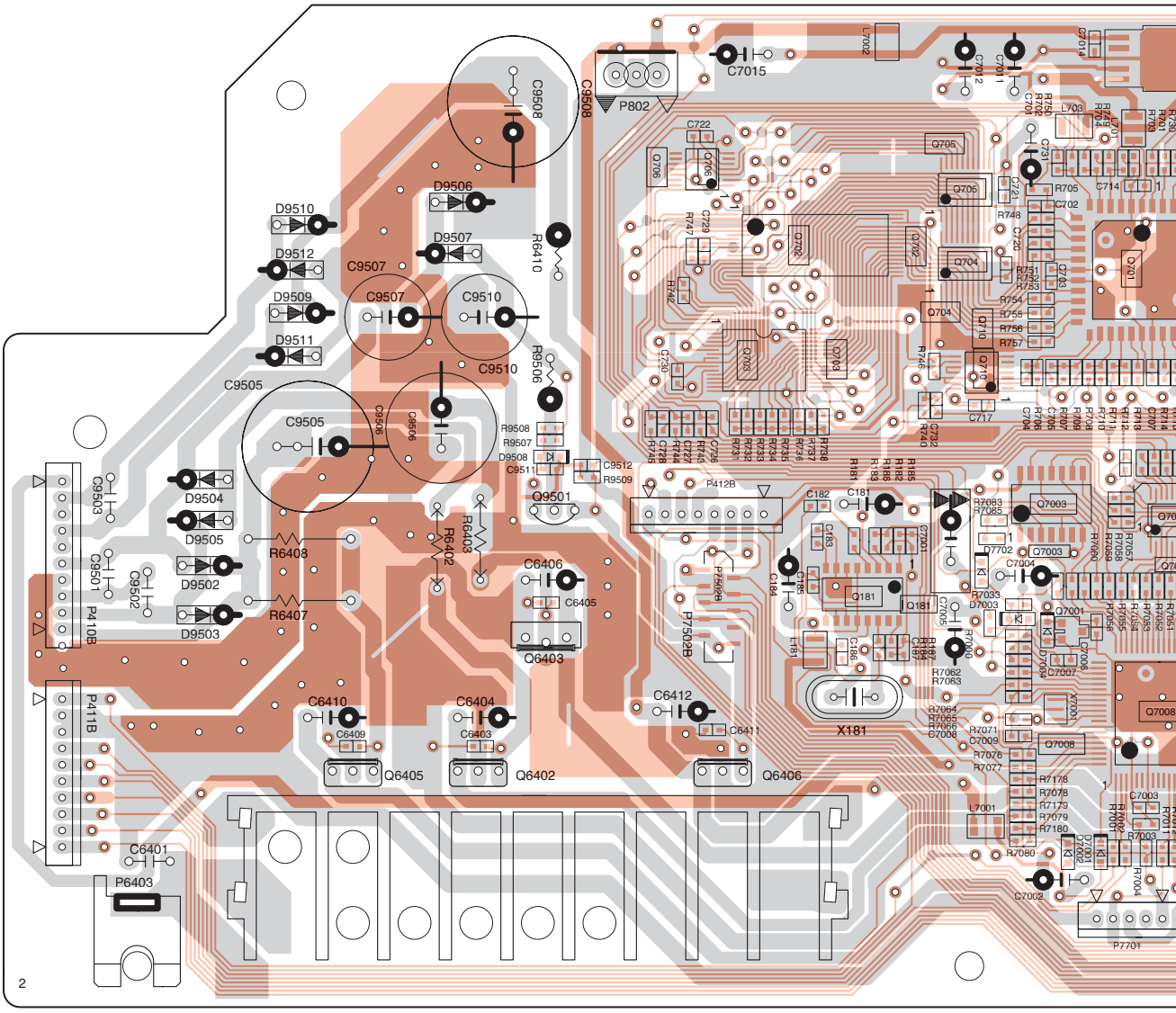
PC BOARD CONNECTION DIAGRAM



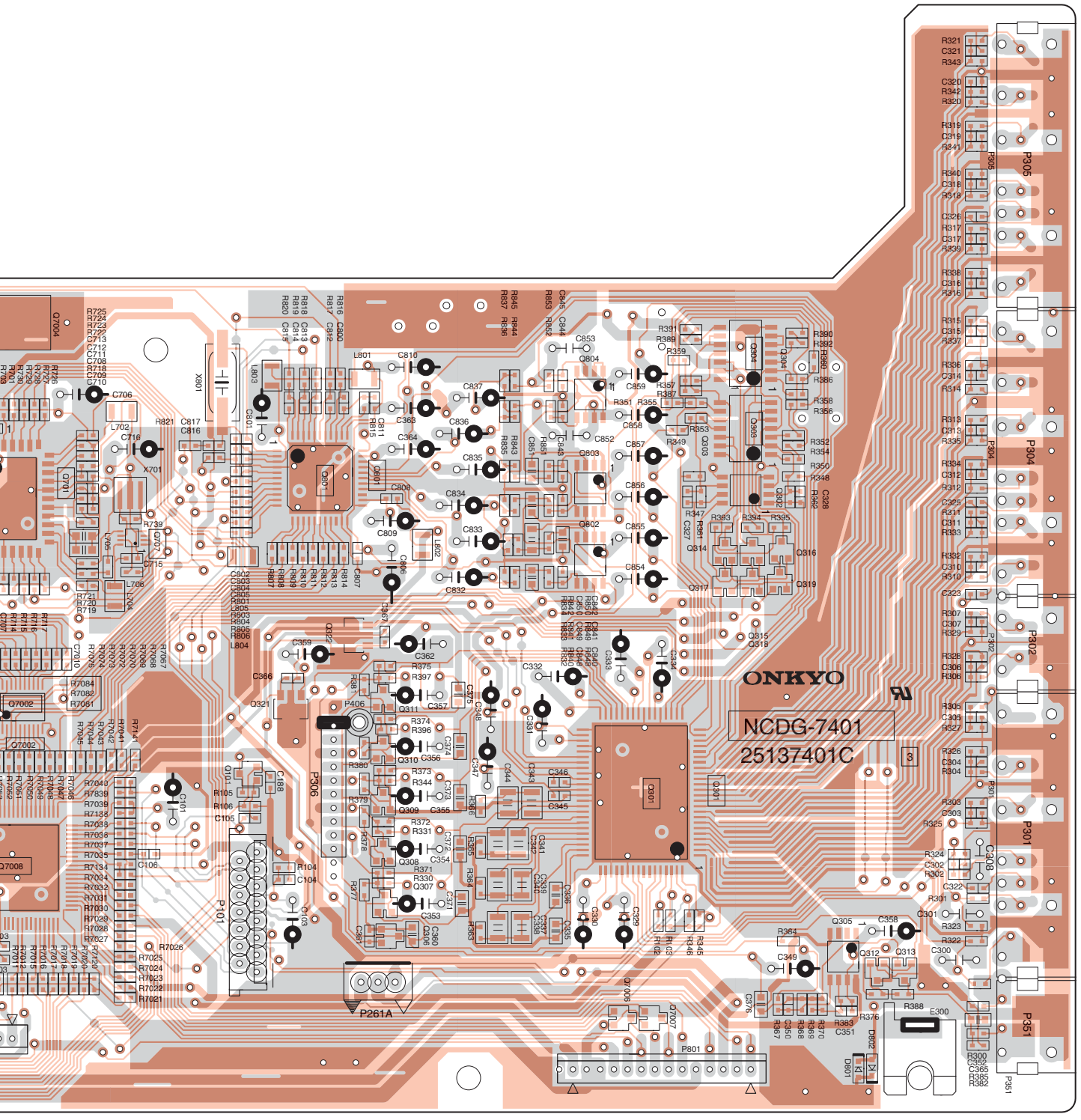
PRINTED CIRCUIT BOARD VIEWS-1

U1 PREAMPLIFIER PC BOARD (NADG-7401)

Component side



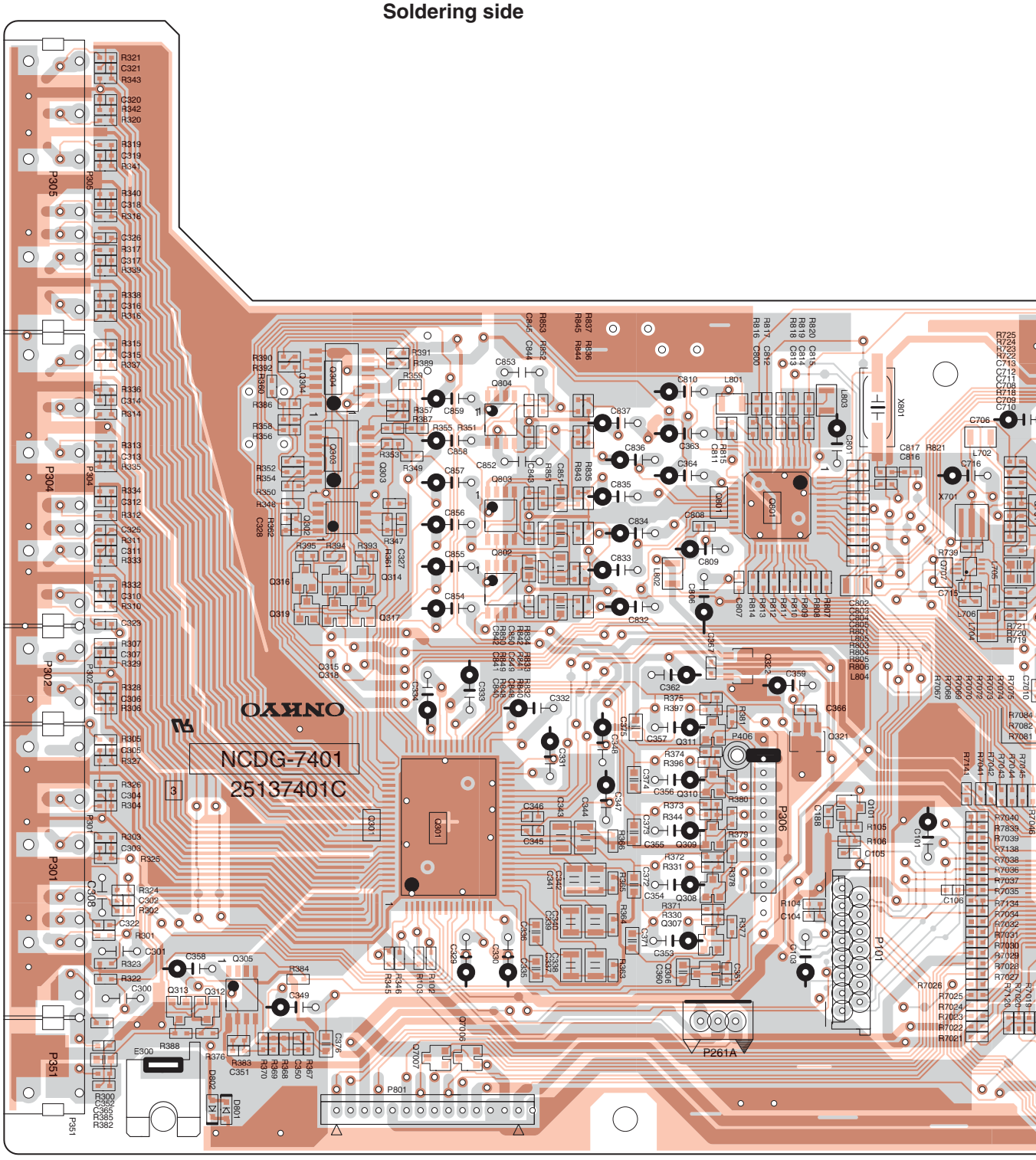
E F G H


ONKYO
NCDG-7401
25137401C
P261A
P306
P101
P305
P304
P302
P301
P351

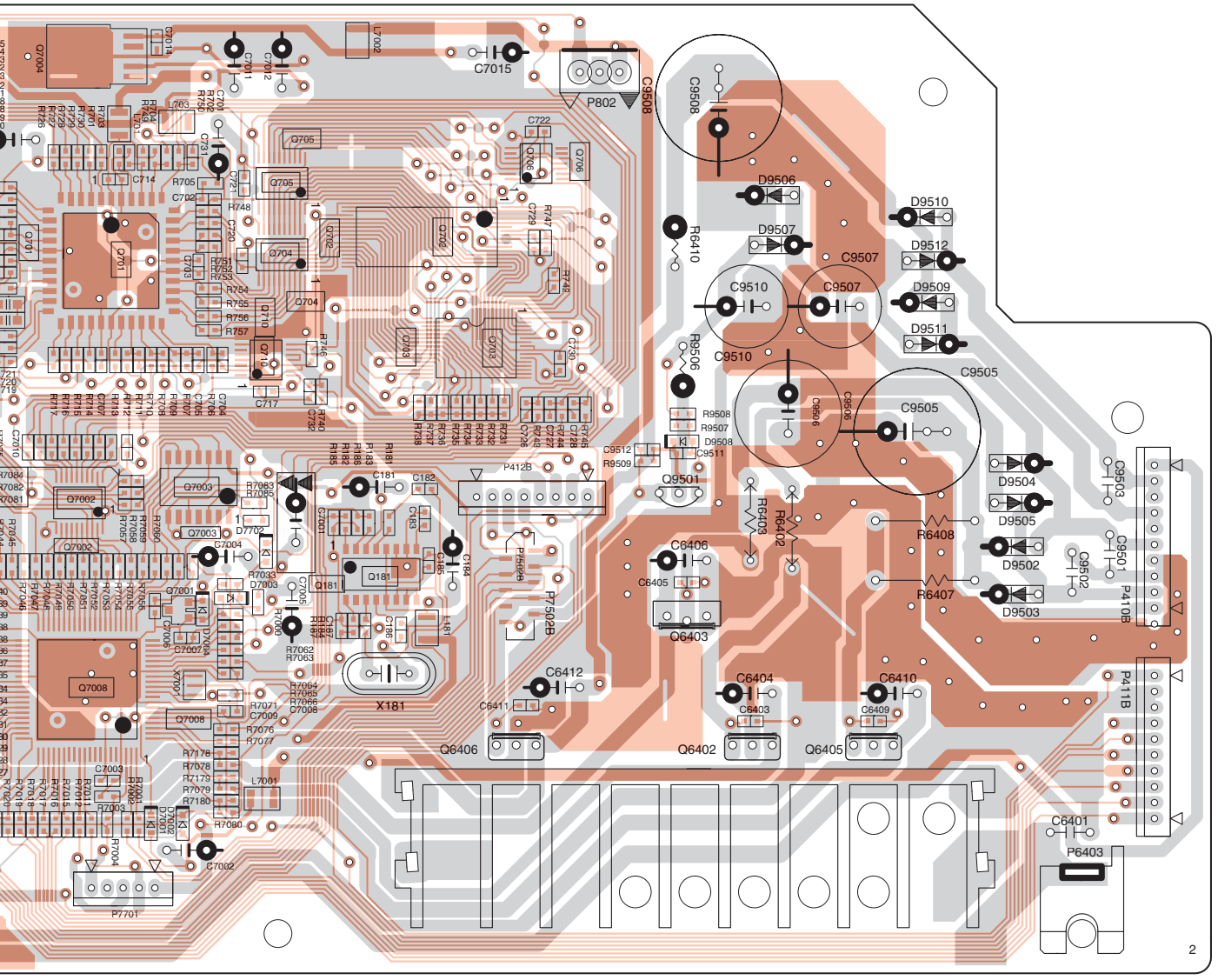
PRINTED CIRCUIT BOARD VIEWS-2

U1 PREAMPLIFIER PC BOARD (NADG-7401)

Soldering side



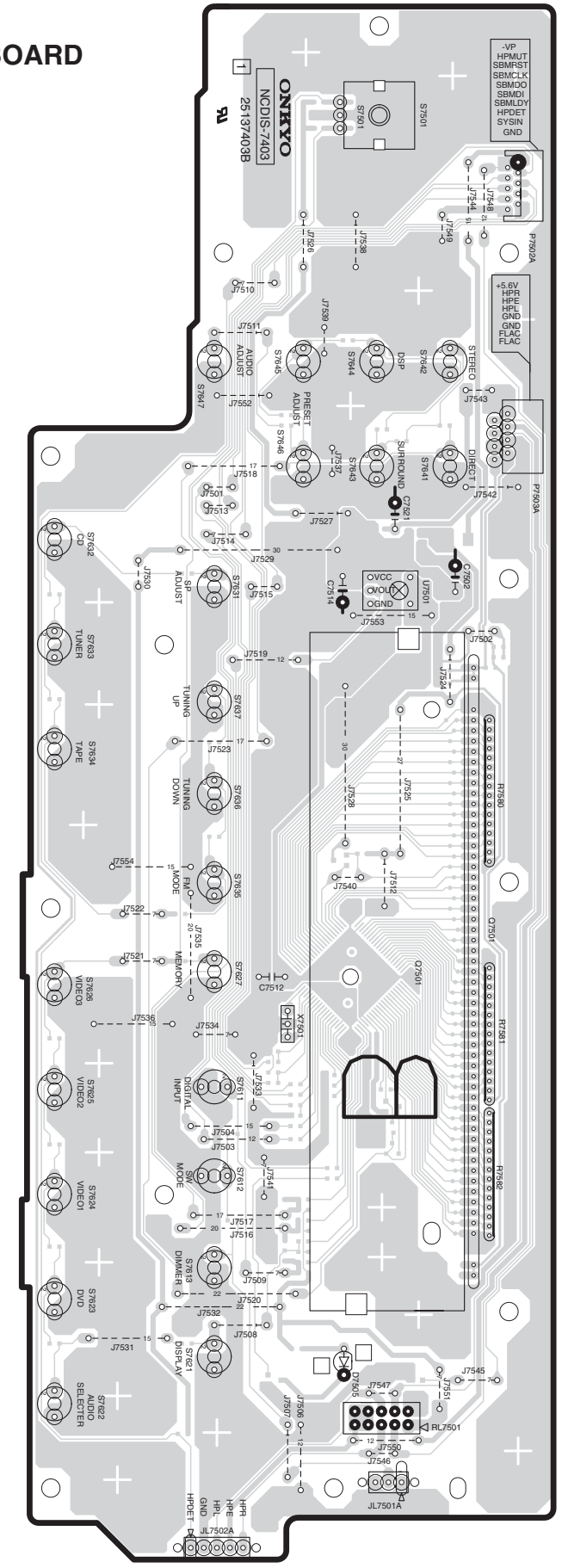
E F G H


C7015
P802
C9508
D9506
D9507
D9510
D9512
D9509
D9511
C9507
C9510
C9505
R6410
R9506
R9508
R9507
D9508
C9511
C9512
R9509
Q9501
R6403
R6402
R6408
R6407
D9504
D9505
D9502
D9503
C9503
C9501
C9502
P410B
C6406
C6405
Q6403
P7502B
C6412
C6411
C6404
C6403
C6410
C6409
Q6406
Q6402
Q6405
P411B
C6401
P6403
X181
P412B
P7701
2

PRINTED CIRCUIT BOARD VIEWS-3

U2 DISPLAY PC BOARD (NADIS-7403)

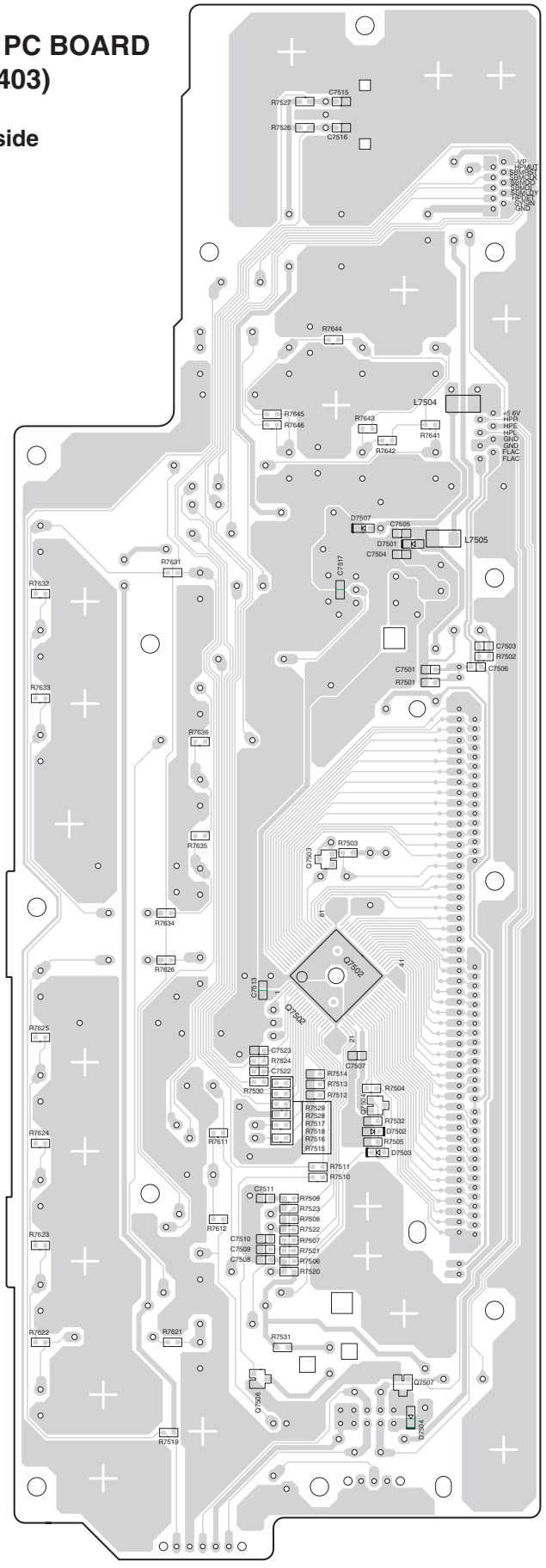
Component side



PRINTED CIRCUIT BOARD VIEWS-4

U2 DISPLAY PC BOARD (NADIS-7403)

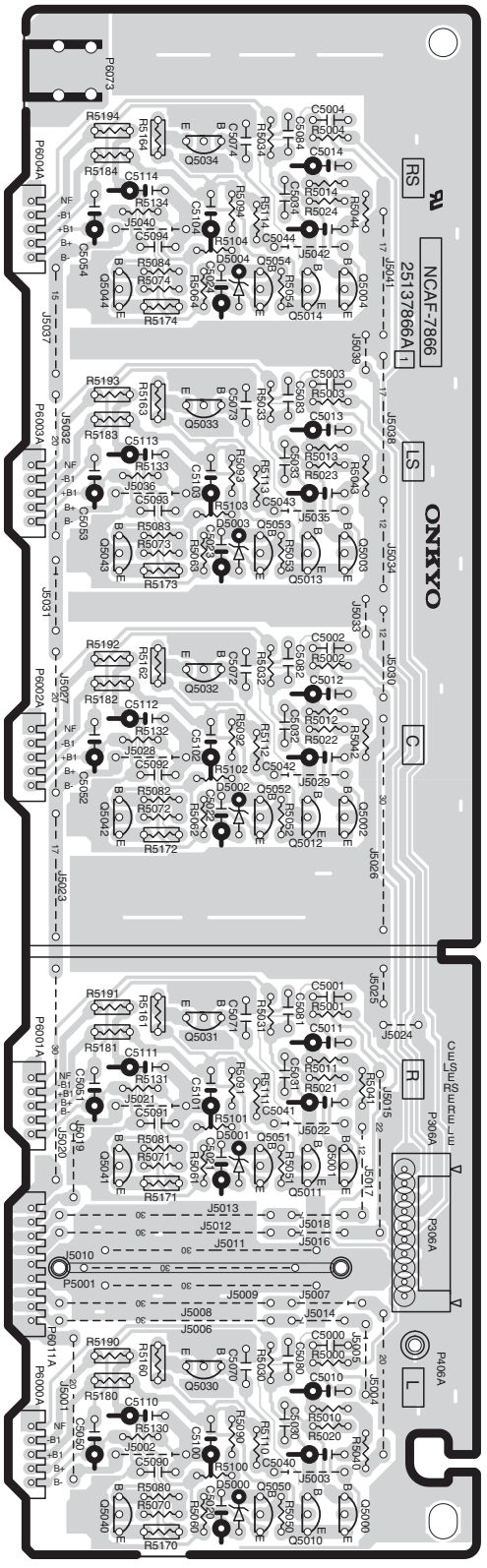
Soldering side



PRINTED CIRCUIT BOARD VIEWS-5

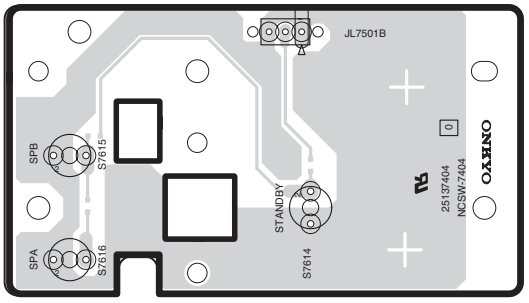
U8 DRIVER AMPLIFIER PC BOARD (NAAF-7866)

Component side

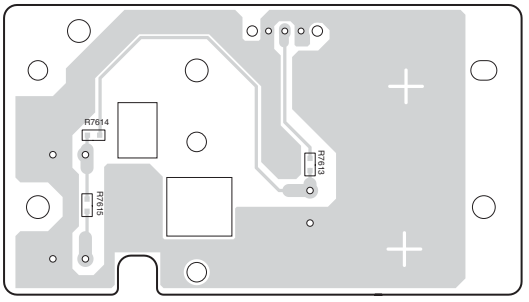


U3 SWITCH PC BOARD (NASW-7404)

Component side

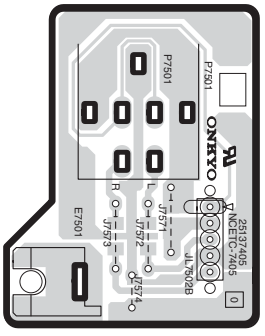


Soldering side

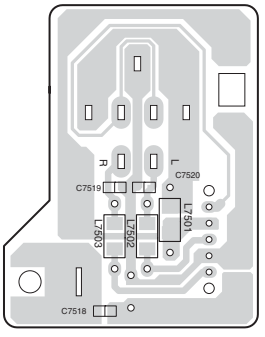


U4 HEADPHONE JACK PC BOARD (NAETC-7405)

Component side



Soldering side

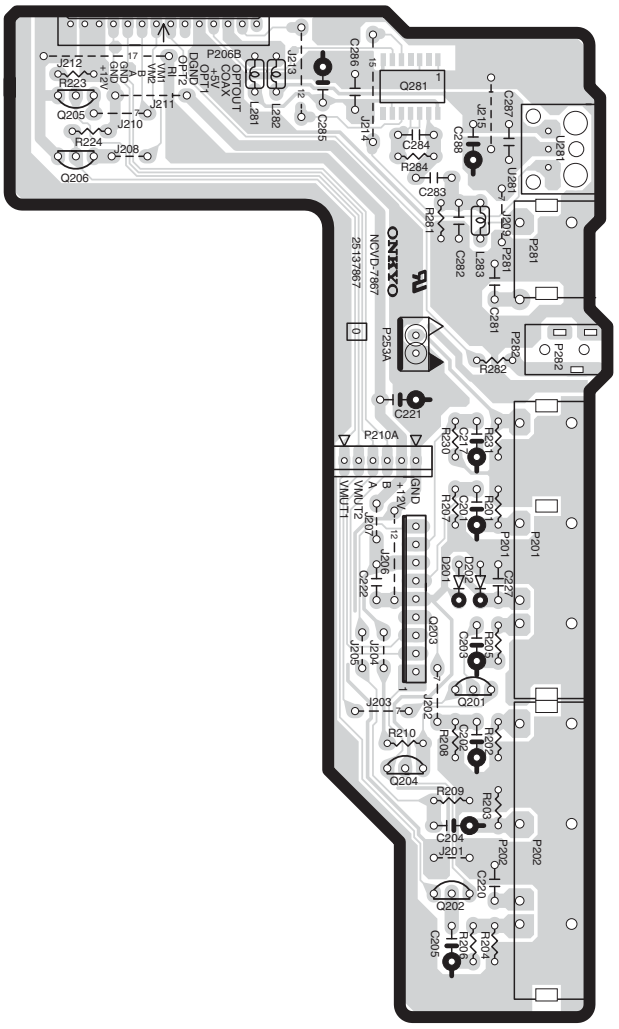


A B C D

PRINTED CIRCUIT BOARD VIEWS-6

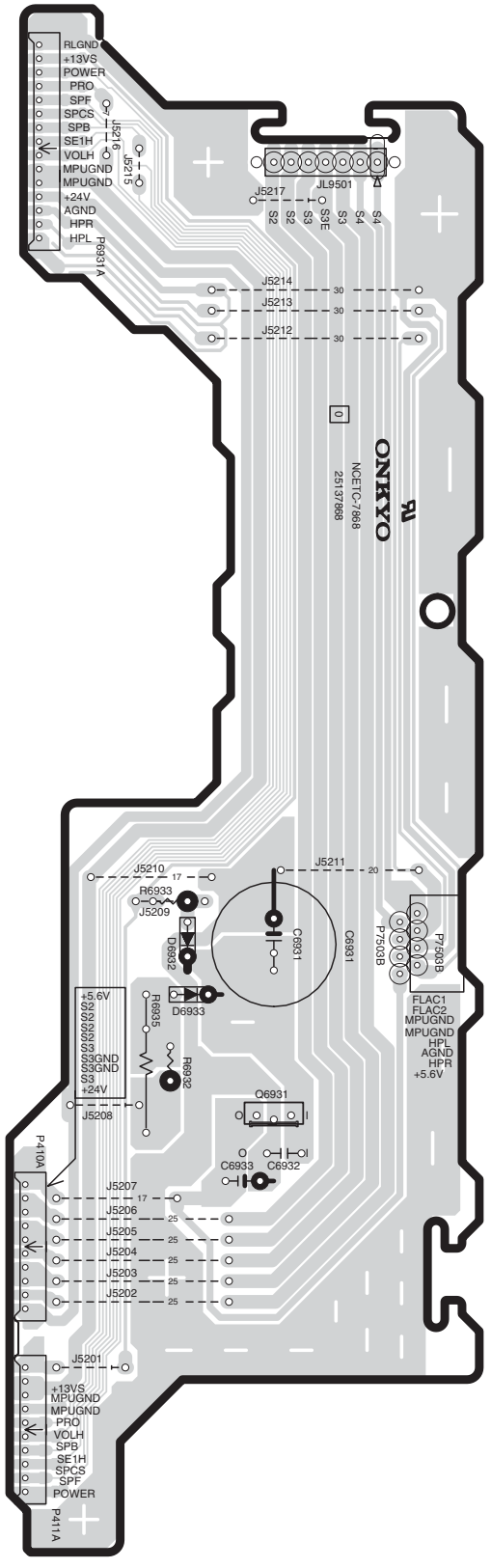
U9 VIDEO & OPT TERMINAL PC BOARD (NAVD-7867)

Component side



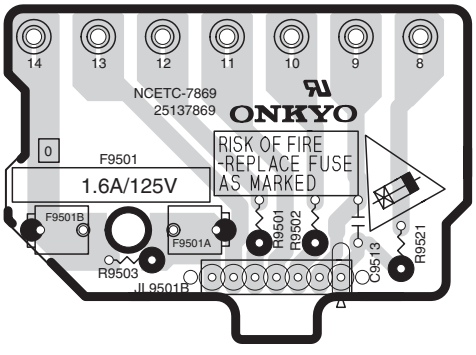
U10 REGULATOR PC BOARD (NAETC-7868)

Component side



U11 TERMINAL PC BOARD (NAETC-7869)

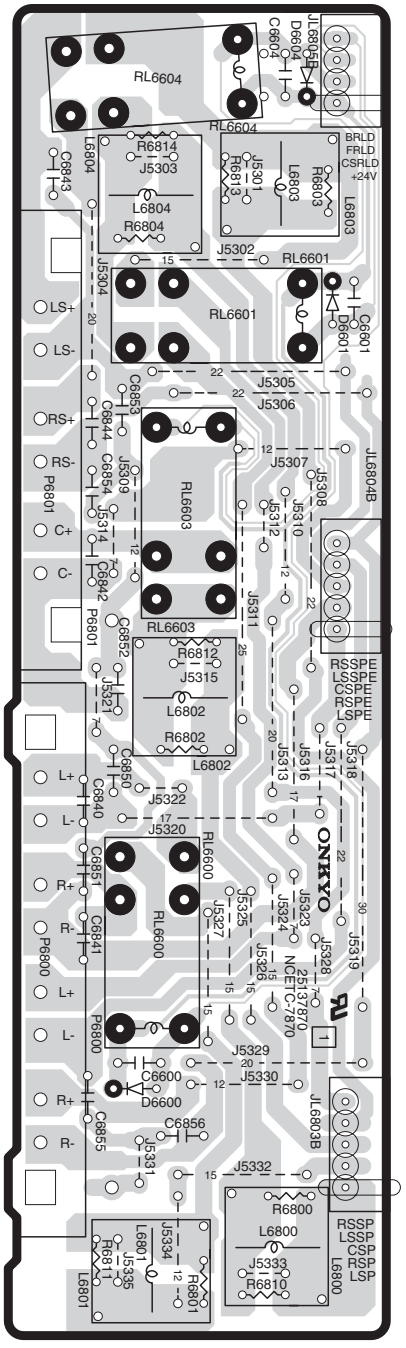
Component side



PRINTED CIRCUIT BOARD VIEWS-7

U12 SPEAKER TERMINAL PC BOARD (NAETC-7870)

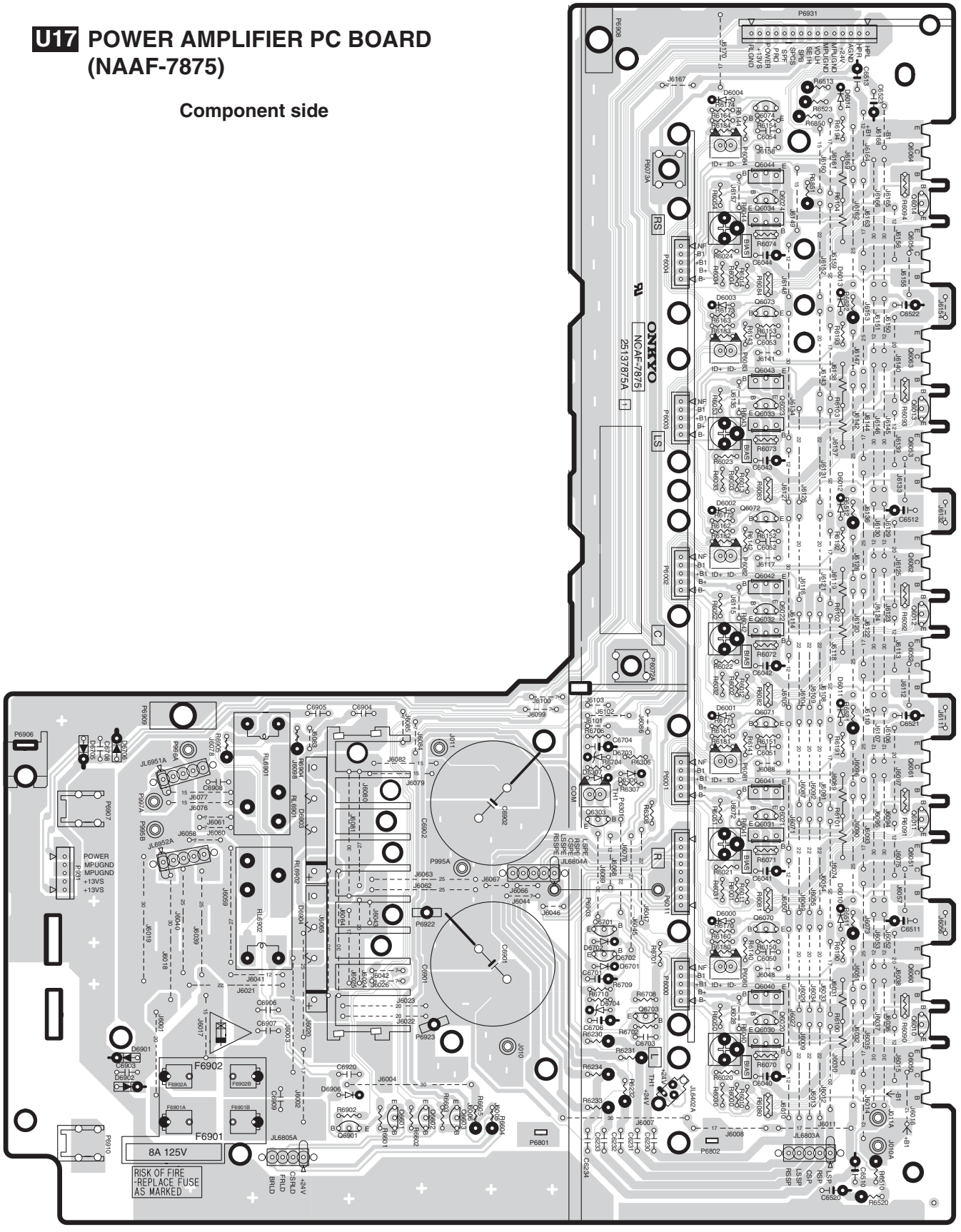
Component side



PRINTED CIRCUIT BOARD VIEWS-8

U17 POWER AMPLIFIER PC BOARD (NAAF-7875)

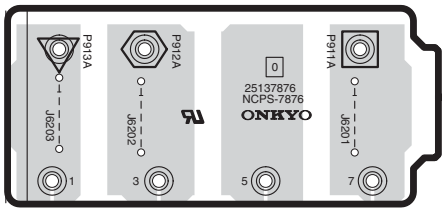
Component side



PRINTED CIRCUIT BOARD VIEWS-9

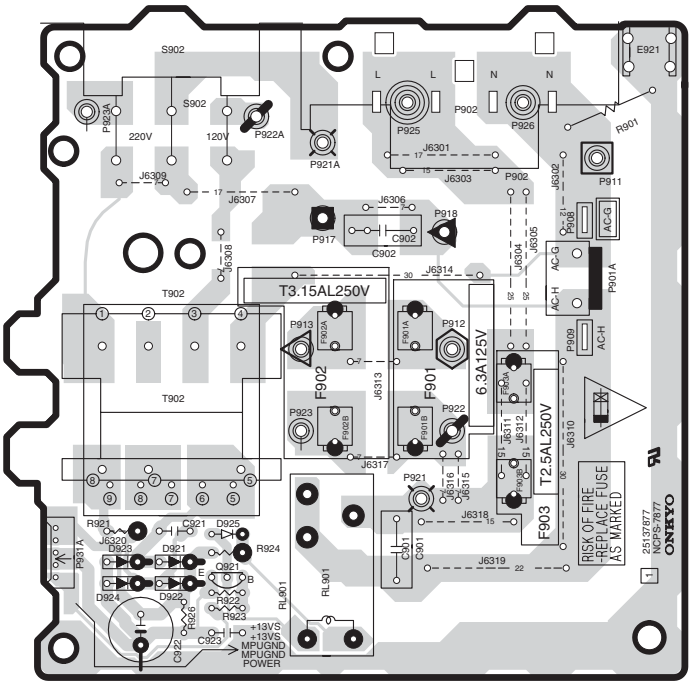
U18 TERMINAL PC BOARD (NAPS-7876)

Component side



U19 POWER SUPPLY PC BOARD (NAPS-7877)

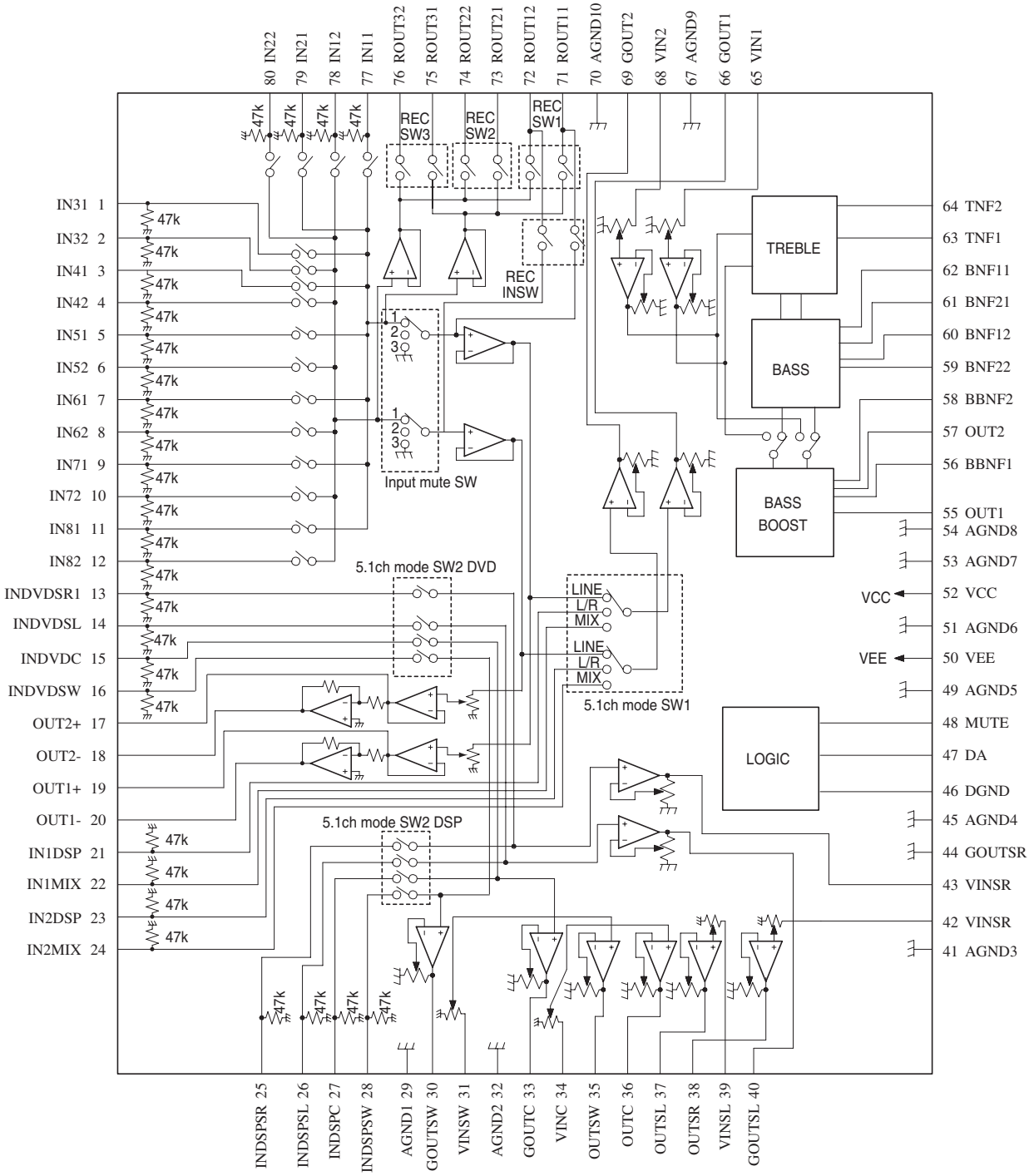
Component side



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-1

Q301:BD3811K1 (6CH Volume with 8ch input selector)-1

BLOCK DIAGRAM



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-2

Q301:BD3811K1 (6CH Volume with 8ch input selector)-2

TERMINAL DESCRIPTION

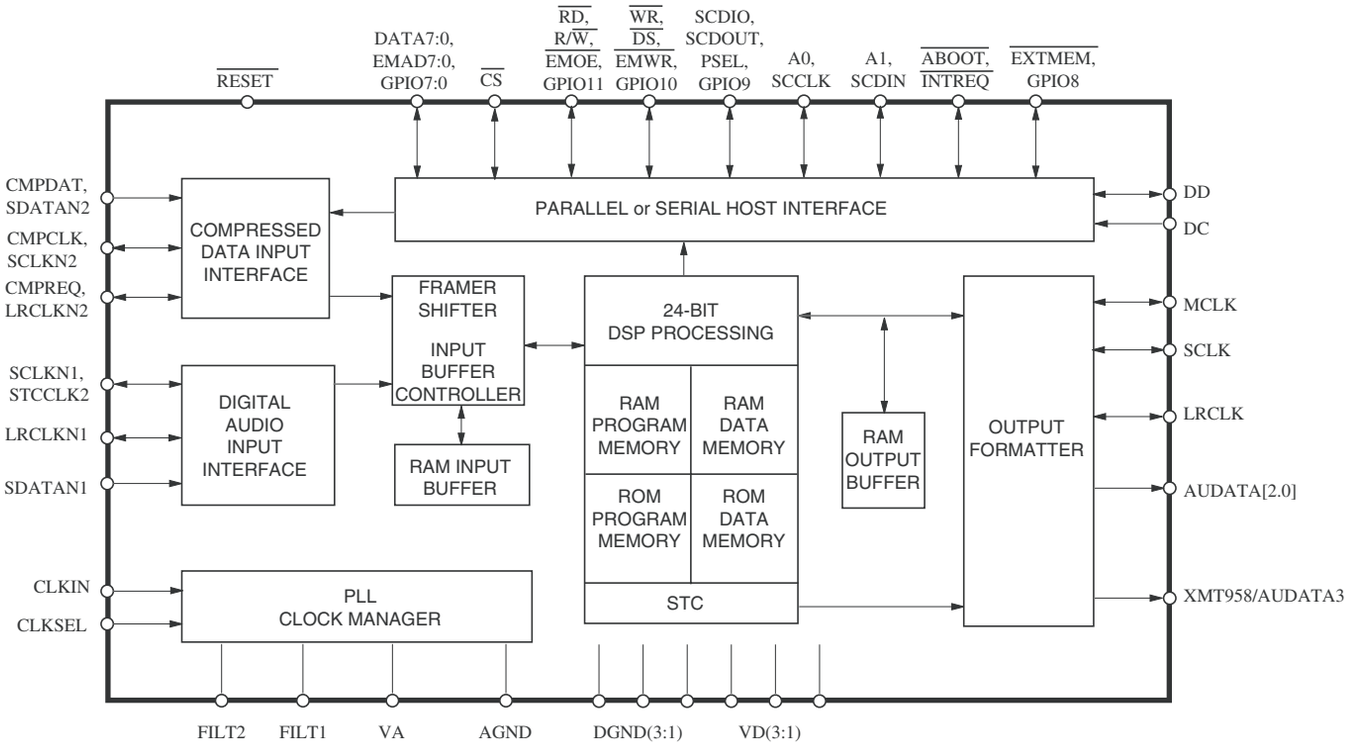
No.	Terminal	Description
1	IN31	1ch input terminal 3
2	IN32	2ch input terminal 3
3	IN41	1ch input terminal 4
4	IN42	2ch input terminal 4
5	IN51	1ch input terminal 5
6	IN52	2ch input terminal 5
7	IN61	1ch input terminal 6
8	IN62	2ch input terminal 6
9	IN71	1ch input terminal 7
10	IN72	2ch input terminal 7
11	IN81	1ch input terminal 8
12	IN82	2ch input terminal 8
13	INDVDSR	DVD surround Rch input terminal
14	INDVDSL	DVD surround Lch input terminal
15	INDVDC	DVD center input terminal
16	INDVDSW	DVD sub woofer input terminal
17	OUT2(+)	2ch (+) A/D output terminal
18	OUT2(-)	2ch (-) A/D output terminal
19	OUT1(+)	1ch (+) A/D output terminal
20	OUT1(-)	1ch (-) A/D output terminal
21	IN1DSP	1ch DSP input terminal
22	IN1MIX	1ch DSP MIX input terminal
23	IN2DSP	2ch DSP input terminal
24	IN2MIX	2ch DSP MIX input terminal
25	INDSPSR	DSP surround Rch input terminal
26	INDSPSL	DSP surround Lch input terminal
27	INDSPC	DSP center input terminal
28	INDSPSW	DSP sub woofer input terminal
29	AGND1	Analog ground terminal
30	GOUTSW	Sub woofer input gain output terminal
31	VINSW	Sub woofer volume input terminal
32	AGND2	Analog ground terminal
33	GOUTC	Center input gain output terminal
34	VINC	Center volume input terminal
35	OUTSW	Sub woofer output terminal
36	OUTC	Center output terminal
37	OUTSL	Surround Lch output terminal
38	OUTSR	Surround Rch output terminal
39	VINSL	Surround Lch volume input terminal
40	GOUTSL	Surround Lch input gain output terminal

No.	Terminal	Description
41	AGND3	Analog ground terminal
42	VINSR	Surround Rch volume input terminal
43	GOUTSR	Surround Rch input gain output terminal
44	AGND4	Analog ground terminal
45	DGND	Ground terminal for comparator
46	DA	Serial data and latch input terminal
47	CL	Serial clock input terminal
48	MUTE	Mute terminal
49	AGND5	Analog ground terminal
50	VEE	(-) Power supply terminal
51	AGND6	Analog ground terminal
52	VCC	(+) Power supply terminal
53	AGND7	Analog ground terminal
54	AGND8	Analog ground terminal
55	OUT1	1ch output terminal
56	BBNF1	1ch bass boost filter terminal
57	OUT2	2ch output terminal
58	BBNF2	2ch bass boost filter terminal
59	BNF22	2ch bass filter terminal 2
60	BNF12	2ch bass filter terminal 1
61	BNF21	1ch bass filter terminal 2
62	BNF11	1ch bass filter terminal 1
63	TNF1	1ch treble filter terminal 1
64	TNF2	2ch treble filter terminal 1
65	VIN1	1ch(Lch) volume input terminal
66	GOUT1	1ch(Lch) input gain output terminal
67	AGND9	Analog ground terminal
68	VIN2	2ch(Rch) volume input terminal
69	GOUT2	2ch(Rch) input gain output terminal
70	AGND10	Analog ground terminal
71	ROUT11	1ch recording input/output terminal 1
72	ROUT12	2ch recording input/output terminal 1
73	ROUT21	1ch recording output terminal 2
74	ROUT22	2ch recording output terminal 2
75	ROUT31	1ch recording output terminal 3
76	ROUT32	2ch recording output terminal 3
77	IN11	1ch input terminal 1
78	IN12	2ch input terminal 1
79	IN21	1ch input terminal 2
80	IN22	2ch input terminal 2

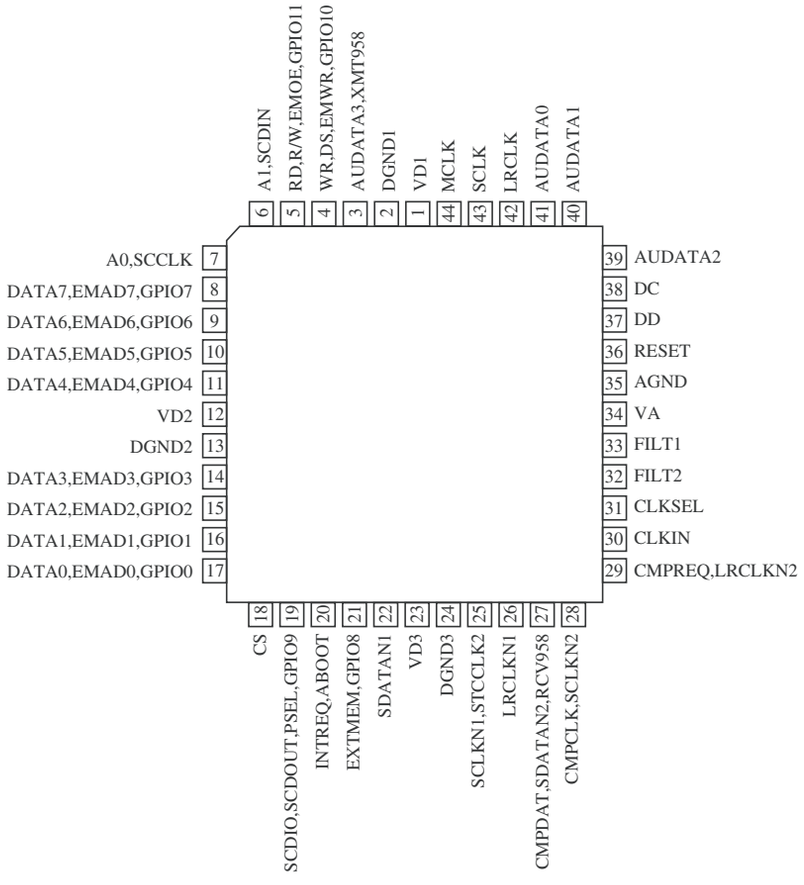
IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-3

Q701:CS493264(DSP IC)-1

BLOCK DIAGRAM



PIN LAYOUT



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-4

Q701:CS493264(DSP IC)-2

TERMINAL DESCRIPTION

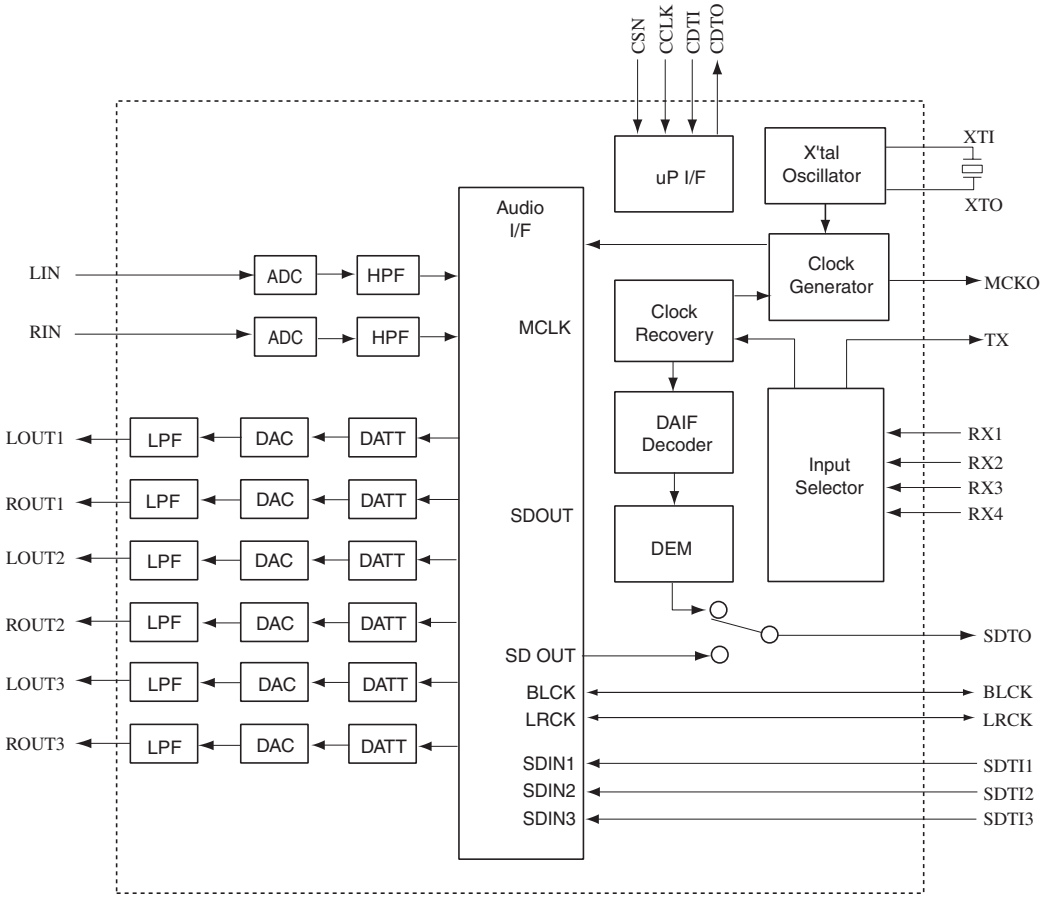
No.	Symbol	Description
1	VD1	Digital positive suppy
2	DGMD1	Digital suppy ground
3	AUDATA3,XMT958	SPDIF transmitter output. Digital audio output.
4	WR,DS,EMWR,GPIO10	Host write strobe or host data strobe or external memory write enable general purpose input & output number 10.
5	RD,R/W,EMOE,GPIO11	Host parallel output enable or host parallel R/W or external memory output enable or general purpose input & output number 11.
6	A1,SCDIN	Host address bit one or SPI serial control data input.
7	A0,SCCLK	Host parallel address bit zero or serial control port clock.
8	DATA7	In parallel host mode these pins provide a bi-directional databus. If a serial host mode is selected, these pins can provide a multiplexed address and data bus for connecting an 8-bit external memory. Otherwise, in serial data host mode, these pins can act as general-purpose input or output pins that can be individually configured and controlled by this DSP.
9	DATA6	
10	DATA5	
11	DATA4	
12	VD2	Digital positive supply.
13	DGND2	Digital supply ground.
14	DATA3	In parallel host mode these pins provide a bi-directional data bus. If a serial host mode is selected, these pins can provide a multiplexed address and data bus for connecting an 8-bit external memory. Otherwise, in serial data host mode, these pins can act as general-purpose input or output pins that canbe individually configured and controlled by this DSP.
15	DATA2	
16	DATA1	
17	DATA0	
18	CS	Host parallel chip select, host serial SPI chip select.
19	SCDIO,SCDOUT,PSEL, GPIO9	Serial control port data input and output, parallel port type select.
20	INREQ,ABOOT	Control port interrupt request, automatic boot enable.
21	EXTMEM,GPIO8	External memory chip select or general purpose input & output number 8.
22	SDATAN1	PCM audio data input number one.
23	VD3	Digital positive supply.
24	DGND3	Digital supply ground.
25	SCLK1,STCLK2	PCM audio data input bit clock.
26	LRCLKN1	PCM audio input sample rate clock.
27	CMPDAT, SDATAN2	PCM audio data input number two.
28	CMPCLK,SCLKN2	PCM audio input bit clock.
29	CMPREQ	PCM audio input sample rate clock.
	LRCLKN2	
30	CLKIN	Master clock input pin.
31	CLKSEL	DSP clock select pin.
32	FILT2	Phase locked loop filter.
33	FILT1	
34	VA	Analog positive supply.
35	AGND	Analog supply ground.
36	RESET	Master reset input.

No.	Symbol	Description
37	DD	Reserved.
38	DC	
39	AUDATA2	Digital audio output 2.
40	AUDATA1	Digital audio output 1.
41	AUDATA0	Digital audio output 0.
42	LRCLK	Audio output sample rate clock.
43	SCLK	Audio output bit clock.
44	MCLK	Audio master clock.

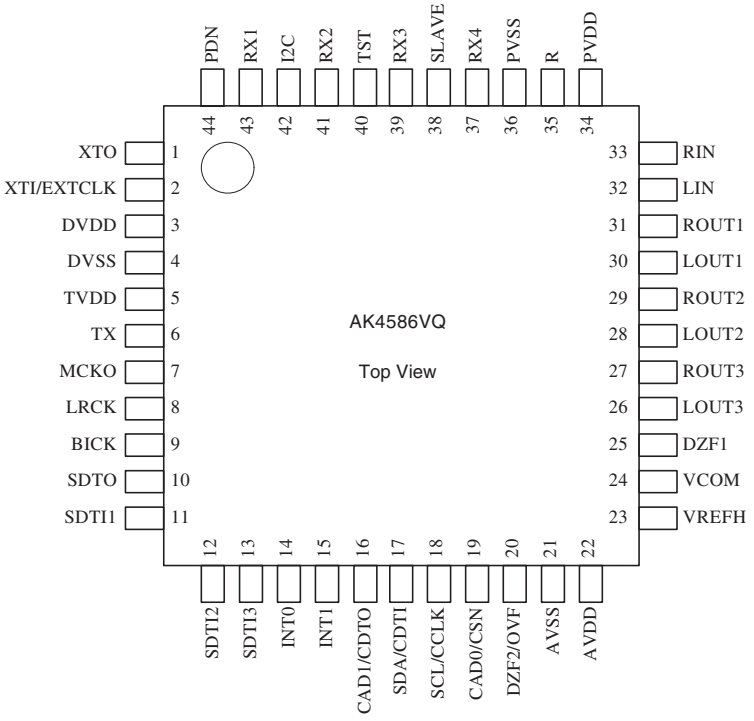
IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-5

Q801: AK4586 (24-Bit 96kHz 6-channel CODEC with DIR)-1

BLOCK DIAGRAM



PIN LAYOUT



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS-6

Q801: AK4586 (24-Bit 96kHz 6-channel CODEC with DIR)-2

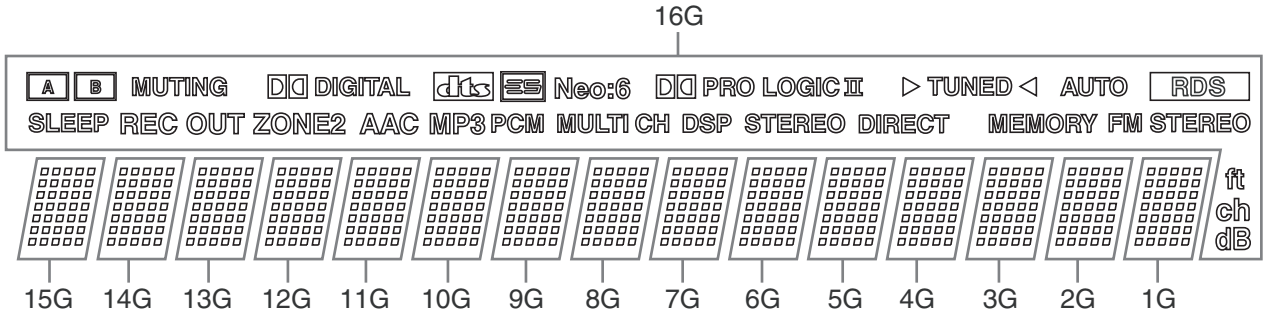
TERMINAL DESCRIPTION

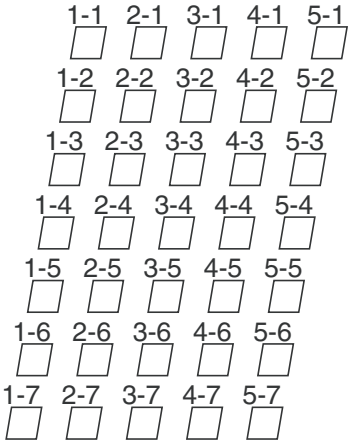
No.	Pin Name	I/O	Function
1	XTO	O	X'tal Output Pin
2	XTI	I	X'tal Input Pin
	EXTCLK	I	External Master Clock Input Pin
3	DVDD	-	Digital Power Supply Pin, 4.5V～5.5V
4	DVSS	-	Digital Ground Pin, 0V
5	TVDD	-	Output Buffer Power Supply Pin, 2.7V～5.5V
6	TX	O	Transmit channel (through data) Output Pin
7	MCKO	O	Master Clock Output Pin
8	LRCK	I/O	Input/Output Channel Clock Pin
9	BICK	I/O	Audio Serial Data Clock Pin
10	SDTO	O	Audio Serial Data Output Pin
11	SDTI1	I	DAC1 Audio Serial Data Input Pin
12	SDTI2	I	DAC2 Audio Serial Data Input Pin
13	SDTI3	I	DAC3 Audio Serial Data Input Pin
14	INT0	O	Interrupt 0 pin
15	INT1	O	Interrupt 1 pin
16	CDTO	O	Control Data Output Pin in 4-wire serial control mode
	CAD1	I	Chip Address 1 Pin in I²C bus control mode
17	CDTI	I	Control Data Input Pin in 4-wire serial control mode
	SDA	I/O	Control Data Input/Output Pin in I²C bus control mode
18	CCLK	I	Control Data Clock Pin in 4-wire serial control mode
	SCL	I	Control Data Clock Pin in I²C bus control mode
19	CSN	I	Chip Select Pin in 4-wire serial control mode
	CAD0	I	Chip Address 0 Pin in I²C bus control mode
20	DZF2	O	Zero Input Detect 2 Pin When the input data of the group 1 follow total 8192 LRCKcycles with "0" input data, this pin goes to "H".
	OVF	O	Analog Input Overflow Detect Pin This pin goes to "H" if the analog input of Lch or Rch is overflows.
21	AVSS	-	Analog Ground Pin, 0V
22	AVDD	-	Analog Power Supply Pin, 4.5V～5.5V
23	VREFH	I	Positive Voltage Reference Input Pin, AVDD
24	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2μF is used to reduce power-supply noise.
25	DZF1	O	Zero Input Detect 1 Pin When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data,this pin goes to "H".
26	LOUT3	O	DAC3 Lch Analog Output Pin
27	ROUT3	O	DAC3 Rch Analog Output Pin
28	LOUT2	O	DAC2 Lch Analog Output Pin
29	ROUT2	O	DAC2 Rch Analog Output Pin
30	LOUT1	O	DAC1 Lch Analog Output Pin

No.	Pin Name	I/O	Function
31	ROUT1	O	DAC1 Rch Analog Output Pin
32	LIN	I	Lch Analog Input Pin
33	RIN	I	Rch Analog Input Pin
34	PVDD	-	PLL Power Supply Pin, 4.5V～5.5V
35	R	-	External Resistor Pin 18kΩ+/-1% resistor to PVSS externally.
36	PVSS	-	PLL Ground Pin, 0V
37	RX4	I	Receiver Channel 4 Pin (Internal biased pin)
38	SLAVE	I	Slave Mode Pin "L": Master mode or Slave mode, "H": Slave mode
39	RX3	I	Receiver Channel 3 Pin (Internal biased pin)
40	TST	I	Test Pin This pin should be connected to DVSS.
41	RX2	I	Receiver Channel 2 Pin (Internal biased pin)
42	I2C	I	Control Mode Select Pin "L": 4-wire Serial, "H": I2C Bus
43	RX1	I	Receiver Channel 1 Pin (Internal biased pin)
44	PDN	I	Power-Down & Reset Pin When "L ", the AK4586 is powered-down, all output pins go to "L" and the control registers are reset to default state. If the state of CAD1-0 changes, then the AK4586must be reset by PDN.

FL TUBE VIEW

Q7501:16BT123GNK


16G
A B MUTING DIGITAL Neo:6 PRO LOGIC II TUNED AUTO RDS
SLEEP REC OUT ZONE2 AAC MP3 PCM MULTI CH DSP STEREO DIRECT MEMORY FM STEREO
ft
ch
dB
15G 14G 13G 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G



(1G-15G)

	16G	15G-1G
P1	A	1-1
P2	B	2-1
P3	SLEEP	3-1
P4	MUTING	4-1
P5	REC OUT	5-1
P6	ZONE2	1-2
P7	-	2-2
P8	DIGITAL	3-2
P9		4-2
P10		5-2
P11	AAC	1-3
P12	MP3	2-3
P13	PCM	3-3
P14	Neo:6	4-3
P15	PRO LOGIC	5-3
P16	II	1-4
P17	MULTI CH	2-4
P18	DSP	3-4

	16G	15G-1G
P19	STEREO	4-4
P20	DIRECT	5-4
P21	-	1-5
P22	▷ ◁	2-5
P23	TUNED	3-5
P24	MEMORY	4-5
P25	AUTO	5-5
P26	FM STEREO	1-6
P27	RDS	2-6
P28	ft	3-6
P29	ch	4-6
P30	dB	5-6
P31	-	1-7
P32	-	2-7
P33	-	3-7
P34	-	4-7
P35	-	5-7

MICROPROCESSOR TERMINAL DESCRIPTIONS-1

Q7008:MPD784225GC-249-8BT(MAIN MICROPROCESSOR)

No.	Pin name	I/O	Description
1	PROTECT	I	Current detection and DC voltage detection input terminal.
2	VOLH	I	Thermal detection and power amplifier output level detection input terminal.
3	BAND	I	Input terminal for destination setup.
4	AVSS	I	Power supply terminal +5V.
5	NU	O	Not used.
6	NU	O	Not used.
7	AVREF1	I	Ground terminal for A/D converter.
8	NU	O	Not used.
9	NU	O	Not used.
10	NU	O	Not used.
11	NU	O	Not used.
12	NU	O	Not used.
13	NU	O	Not used.
14	NU	O	Not used.
15	MCRDY	I	Data ready detection input terminal from the sub microprocessor.
16	MCSDI	I	Data input terminal from the sub microprocessor.
17	MCSDO	O	Data output terminal to the sub microprocessor.
18	MCCLK	O	Serial clock output terminal to the sub microprocessor.
19	~MCRST	O	Reset signal output terminal to the sub microprocessor.
20	HPMUT	O	Muting control output terminal for headphone amplifier. Not used.
21	HPIN	I	Input terminal to detect the connection of headphone.
22	SPBRL	O	Speaker relay control output terminal for front B.
23	SEC1H	O	Control output terminal for power supply voltage of power amplifier.
24	SPACSRL	O	Speaker relay control output terminal for center and surround channels.
25	SPAFRL	O	Speaker relay control output terminal for front-A channels.
26	POWRL	O	Power source relay control output terminal.
27	VCTRLA	O	Control signal-A output terminal for the video selector switch.
28	VCTRLB	O	Control signal-B output terminal for the video selector switch.
29	VMUT2	O	Muting control-2 output terminal for the video section.
30	VMUT1	O	Muting control-1 output terminal for the video section.
31	NU	O	Not used.
32	NU	O	Not used.
33	VSS1	I	Ground terminal.
34	AMUT	O	Audio muting control output terminal.
35	PLLSTB	O	Strobe signal output terminal to PLL IC.
36	PLLSDO	O	Serial data output terminal to PLL IC.
37	PLLCLK	O	Serial clock output terminal to PLL IC.
38	TUMUT	O	Muting control output terminal for the tuner section.

No.	Pin name	I/O	Description
39	~SD	I	Broadcast detection input terminal more than a muting level.
40	~STEREO	I	FM stereo broadcast detection input terminal.
41	SELMUT	O	Muting control output terminal for selector, volume and tone IC BD3811.
42	SELCLK	O	Serial clock output terminal of selector, volume and tone IC BD3811.
43	SELSDO	O	Serial data and latch signal output terminal for selector, volume and tone IC BD3811.
44	SNONE	O	Not used.
45	SWNONE	O	Not used.
46	CNONE	O	Not used.
47	~DIRCS	O	Chip select signal output terminal to DIR IC AK4586.
48	~DSPCS	O	Chip select signal output terminal to DSP IC.
49	~ROM/RAM	O	ROM/RAM select terminal. Not used.
50	ADDR15	O	DSP boot ROM address 15 select terminal. Not used.
51	ADDR16	O	DSP boot ROM address 16 select terminal. Not used.
52	ADDR17	O	DSP boot ROM address 17 select terminal. Not used.
53	DSPCLK	O	Serial clock output terminal for DSP IC CS493264,DIR and CODEC IC AK4586.
54	DSPSDO	O	Serial data output terminal for DSP IC CS493264,DIR and CODEC IC AK4586.
55	~DSPRST	O	Reset signal output terminal to DSP IC.
56	DSPSDI	I	Serial data input terminal from DSP IC CS493264,DIR and CODEC IC AK4586.
57	DIRINT1	I	Input terminal to detect the status of DIR IC.
58	DIRINT0	I	Input terminal to detect the unlock of DIR IC.
59	~DIRPD	O	Power down terminal to DIR and CODEC ICs.
60	RESET	I	Reset input terminal.
61	NU	O	Not used.
62	POFF	I	Power failure detection input terminal.
63	NU	O	Not used.
64	~INTREQ/~ABOOT	I/O	Interrupter input terminal from DSP IC.
65	PROTHERM	I	Not used.
66	~RDSCLK	I	RDS clock input terminal (European model only)
67	VSS0	I	Ground terminal.
68	VDD0	I	Power supply terminal +5V.
69	X2	O	Connect the ceramic oscillator 12.5MHz.
70	X1	I	Connect the ceramic oscillator 12.5MHz.
71	TEST/VPP	I	Test terminal.
72	XT2	O	Not used.
73	XT1	I	Not used.
74	VDD0	I	Power supply terminal +5V.
75	AVDD	I	Power supply terminal for A/D converter +5V.
76	RDSDATA	I	Data input terminal of RDS broadcast (European model only)
77	RDSSIG	I	Input terminal to check the signal of RDS broadcast (European model only)
78	INIT1	I	Input terminal-1 for destination setup.
79	INIT2	I	Input terminal-2 for destination setup.
80	INIT3	I	Input terminal-3 for destination setup.

MICROPROCESSOR TERMINAL DESCRIPTIONS-2

Q7502:MPD780232GC-030-8BT(SUB MICROPRCESSOR)

No.	Pin name	I/O	Description
1	VDD1	I	Power supply terminal. Connect to 5V.
2	VSS1	I	Ground terminal.
3	X1	I	X'tal input terminal.
4	X2	O	X'tal input terminal.
5	IC	I	Connect to ground. Not used.
6	~RESET	I	System reset signal input terminal.
7	SUBCL/SCK	I	Clock input terminal to transmit the signal from main microprocessor.
8	SUBDO/SDI	I	Data input terminal to transmit the signal from main microprocessor.
9	SUBDI/SDO	O	Data output terminal to transmit the signal to main microprocessor.
10	SUBRDY	O	Data ready output terminal to transmit to the main microprocessor.
11	VBJ	I	Pulse input terminal from the rotary encoder of volume.
12	VAJ	I	Pulse input terminal from the rotary encoder of volume.
13	SSCBJ	I	Not used.
14	SSCAJ	I	Not used.
15	~IRIN	I	Not used.
16	~IRF	I	Signal input terminal from the remote controller.
17	STBYLED	O	Standby LED control output terminal.
18	AVSS	I	Ground terminal for A/D converter.
19	K3	I	Operation key connection terminal.
20	K2	I	Operation key connection terminal.
21	K1	I	Operation key connection terminal.
22	K0	I	Operation key connection terminal.
23	VSS0	I	Ground terminal.
24	AVDD	I	Power supply terminal for A/D converter.
25	VDDO	I	Power supply terminal. Apply +5V.
26	~SYSIN	I	System code input terminal.
27	~SYSOUT	O	System code output terminal.
28	P35	O	Segment output terminal of P35.
29	P34	O	Segment output terminal of P34.
30	P33	O	Segment output terminal of P33.
31	P32	O	Segment output terminal of P32.
32	P31	O	Segment output terminal of P31.
33	P30	O	Segment output terminal of P30.
34	P29	O	Segment output terminal of P29.
35	P28	O	Segment output terminal of P28.
36	P27	O	Segment output terminal of P27.
37	P26	O	Segment output terminal of P26.
38	P25	O	Segment output terminal of P25.
39	P24	O	Segment output terminal of P24.
40	P23	O	Segment output terminal of P23.

No.	Pin name	I/O	Description
41	P22	O	Segment output terminal of P22.
42	P21	O	Segment output terminal of P21.
43	P20	O	Segment output terminal of P20.
44	P19	O	Segment output terminal of P19.
45	P18	O	Segment output terminal of P18.
46	P17	O	Segment output terminal of P17.
47	P16	O	Segment output terminal of P16.
48	P15	O	Segment output terminal of P15.
49	P14	O	Segment output terminal of P14.
50	P13	O	Segment output terminal of P13.
51	P12	O	Segment output terminal of P12.
52	P11	O	Segment output terminal of P11.
53	P10	O	Segment output terminal of P10.
54	P9	O	Segment output terminal of P9.
55	P8	O	Segment output terminal of P8.
56	P7	O	Segment output terminal of P7.
57	P6	O	Segment output terminal of P6.
58	P5	O	Segment output terminal of P5.
59	VDD2	I	Power supply terminal. Apply connect to +5V.
60	VLOAD	I	Negative power supply terminal of FL controller.
61	P4	O	Segment output terminal of P4.
62	P3	O	Segment output terminal of P3.
63	P2	O	Segment output terminal of P2.
64	P1	O	Segment output terminal of P1.
65	16G	O	Grid output terminal of 16G.
66	15G	O	Grid output terminal of 15G.
67	14G	O	Grid output terminal of 14G.
68	13G	O	Grid output terminal of 13G.
69	12G	O	Grid output terminal of 12G.
70	11G	O	Grid output terminal of 11G.
71	10G	O	Grid output terminal of 10G.
72	9G	O	Grid output terminal of 9G.
73	8G	O	Grid output terminal of 8G.
74	7G	O	Grid output terminal of 7G.
75	6G	O	Grid output terminal of 6G.
76	5G	O	Grid output terminal of 5G.
77	4G	O	Grid output terminal of 4G.
78	3G	O	Grid output terminal of 3G.
79	2G	O	Grid output terminal of 2G.
80	1G	O	Grid output terminal of 1G.

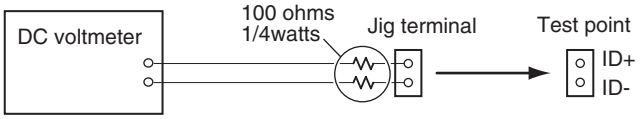
ADJUSTMENT PROCEDURES

IDLING CURRENT ADJUSTMENT

[Note] No load and No signal

Refer to Fig-1 about test points and adjustment points.

1. Before Idling adjustment, turn the trimming resistors R6040, R6041, R6042, R6043 and R6044 to counter clockwise.
2. Connect the DC voltmeter to test point P6080,P6081, P6082, P6083 and P6084.
   Connect 100-ohm resistance near the terminal of the two poles of a Jig terminal.



3. Connect the AC power supply cord to wall outlet.
4. Press the STANDBY/ON button into the power ON state.
5. Adjust the trimming resistors as following procedure immediately after a power ON.

Channel	Trimming resistor (Adjustment point)	Test point (Measuring point)	Adjustment value
L	R6040	P6080	2.5 mV
R	R6041	P6081	2.5 mV
C	R6042	P6082	2.5 mV
SL	R6043	P6083	1.5 mV
SR	R6044	P6084	1.5 mV

6. Wait for 4 - 5 minutes.
7. Re-adjust the trimming resistors as following procedure.

Channel	Adjustment point	Measured value		Adjustment value
L, R, C	R6040, R6041, R6042	In case below 7 mV	→	7 mV
		In case 7 - 9 mV	→	Leave it as it is
		In case over 9 mV	→	9 mV
SL, SR	R6043, R6044	In case below 4 mV	→	4 mV
		In case 4 - 6 mV	→	Leave it as it is
		In case over 6 mV	→	6 mV

8. Disconnect the DC voltmeter.
9. Press the STANDBY/ON button into the power OFF state.
10. Disconnect the AC power supply cord.

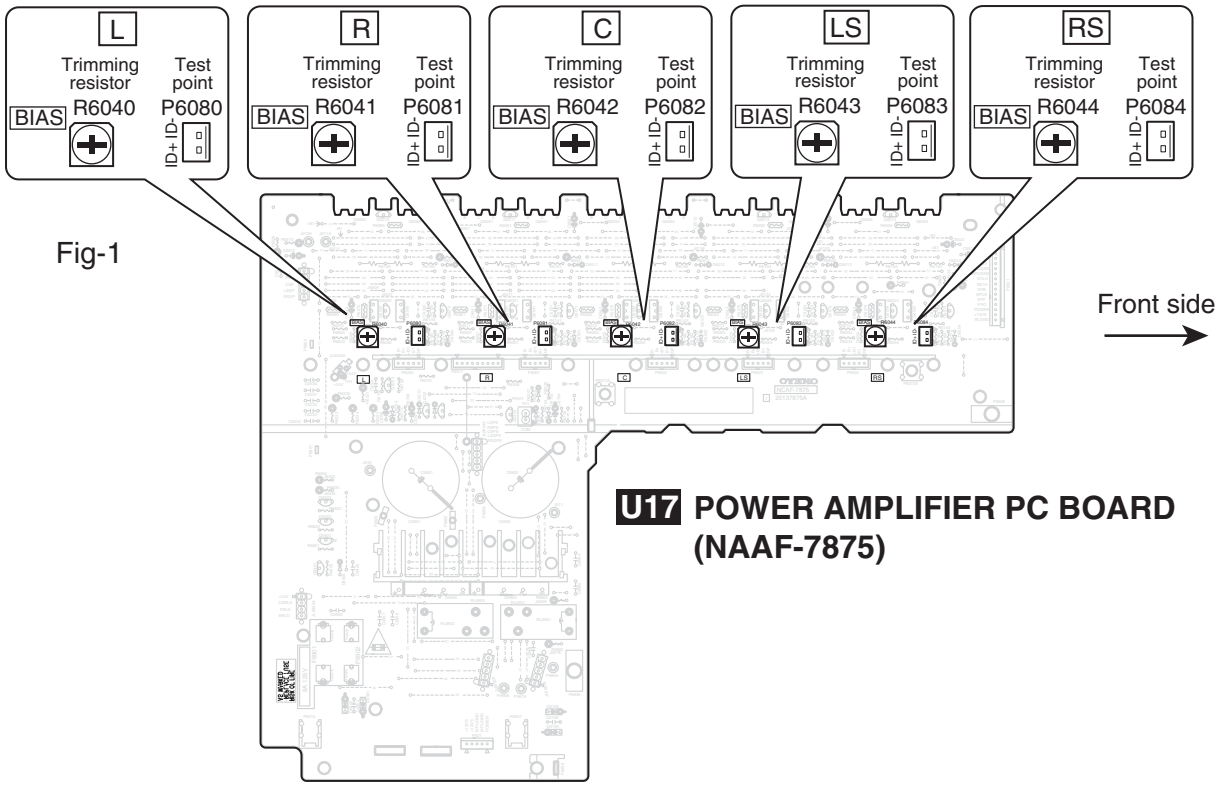


Fig-1

U17 POWER AMPLIFIER PC BOARD (NAAF-7875)

OPERATION CHECK-1

DC VOLTAGE DETECTION PROTECTORS

[NOTE1]
Limit time to apply voltage is 0.5 to 1.0 seconds each channel.
When protection operation does not occur at once, try several times.
[NOTE2]
Don't connect speakers or any load.
Don't short speaker terminals.

1. Set the unit to test mode **" *Test-1-00* "** .
 1-1. Press and the hold down the CD button , then press the STANDBY/ON button when the unit is Power ON.

Test - _

 1-2. Press the DVD button, while the display of " *Test - _* " has come out.
 Unit will be in the state of " *Test-1-00* ".

Test - 1-00

2. Apply DC voltage (+1.5 to +3V) to **MULTI CHANNEL (FL, FR, SL, SR, C, SW)** terminal, each channel.
3. Check that " *Protect* " is display come out.
4. Apply DC voltage (-1.5 to -3V) to **MULTI CHANNEL (FL, FR, SL, SR, C, SW)** terminal, each channel.
5. Check that " *Protect* " is display come out.
6. Press the STANDBY/ON button.

Clear	→	Disappears

CURRENT DETECTION PROTECTORS

[NOTE]
In the state of test mode" *Test-4-29* ", the pulse waveform output for checking from speaker terminal automatically.
Therefore, oscllator is unnecessary.

1. Set the unit to test mode **" *Test-4-29* "**
 1-1. Press and the hold down the CD button , then press the STANDBY/ON button when the unit is Power ON.

Test - _

 1-2. Press the VIDEO 3 button, while the display of " *Test - _* " has come out.
 Unit will be in the state of " *Test-4-00* ".

Test - 4-00

 1-3. Repeat and press SPEAKERS B button until the display of " *Test-4-29* " comes out.

Test - 4-29

2. Connect the lord resister (3 ohms) to the speaker terminals.
3. Check the not displayed " *Protect* " and speaker relays **not** turn OFF.
4. Check the each speaker terminals.
5. Connect the lord resister (1.5 ohms) to the speaker terminals.
6. Check the displayed " *Protect* " and speaker relays turn OFF immediately.
7. Check the each speaker terminals.
8. Press the STANDBY/ON button.

Clear	→	Disappears

OPERATION CHECK-2

OUTPUT LEVEL & THERMAL DETECTION

Regarding the power supply system of this unit.

<Function>

1. High-voltage mode

Usually, the power supply supplies high voltage to the power amplifier circuit when the relay(RL6901) is turned on.

2. Low-voltage mode

When as follows, a power supply changes to the state of supplying low voltage when the relay (RL6901) in turned off.

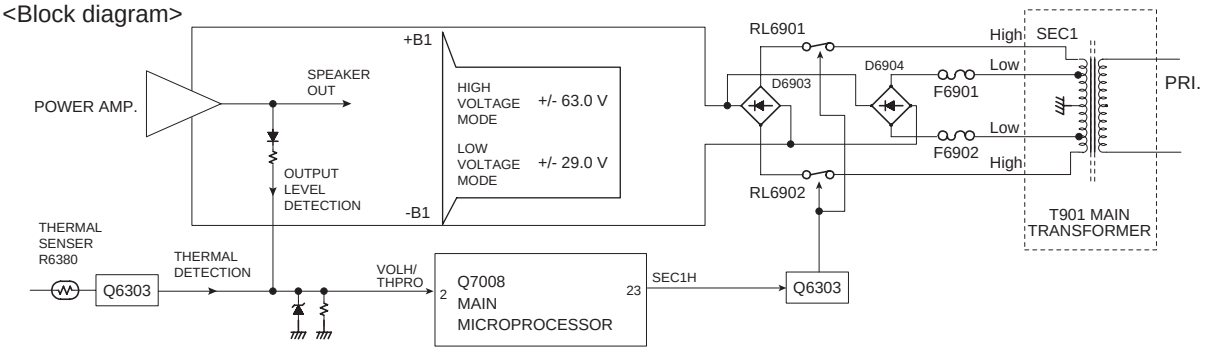
(1) Excessive output signal is continuously outputted from power amplifier.

(2) Temperature of a heat sink over 80 degrees.

<Purpose>

1. The loss which power amplifier generates is decreased. As a result, the miniaturization of a heat sink is realized.
2. Corresponds to a safety standard.

<Block diagram>



<Necessity for a check of operation>

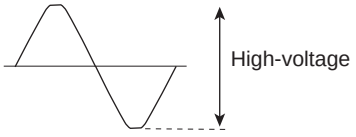
May not notice the fuse (F6901, F6902) broken in the case of repair.
Because the power supply is continuing supplying voltage from the High side of SEC1 at high-voltage mode.
When a power supply circuit changes to low voltage mode, amplifier does not operate.
Therefore, it is very important to check operation of this power supply system containing a fuse.

<Procedure>

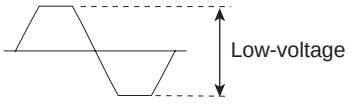
[NOTE]

Don't connect speakers or any load.
Don't short speaker terminals.

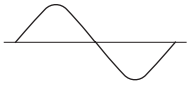
(1) Set the unit is Multi channel input state.
(2) Set the master volume into the minimum.
(3) Apply sine wave signal to MULTI CHANNEL INPUT (FL+FR+C+SL) terminals.
(4) Connect an oscilloscope to speaker terminal of FL channel.
(5) Adjust master volume so that a speaker output may become distortion about 5%.



(6) Check that the RL6901 is turned off after about 5 seconds.
And the power supply changes to low-voltage mode.



(7) Adjust the master volume so that output voltage may become half.



(8) Check that the RL6901 is turned ON after 2 to 3 minutes.
And the power supply returns to high-voltage mode.

OPERATION CHECK-3

OUTPUT LEVEL & THERMAL DETECTION

<Check by test mode>

The following is the procedure of checking detection operation of a microprocessor in false, by using test mode.

Output level detection

1. Set the unit to test mode *" Test-3-2 "*

1-1. Press and the hold down the CD button , then press the STANDBY/ON button when the unit is Power ON.

Test - _

1-2. Press the VIDEO 2 button, while the display of *" Test - _ "* has come out.
Unit will be in the state of " *Test-3-00* ".

Test - 3-00

1-3. Repeat and press SPEAKERS B until the display of *" Test-3-2 "* comes out.

Test - 3-02

2. Apply signal (sine wave 1kHz, -1.5dBV) to **MULTI CHANNEL (FL, FR, SL, SR, C)** terminal, each channel.
3. Check that FM STEREO indicator is display come out.

FM STEREO *Test - 3-02*

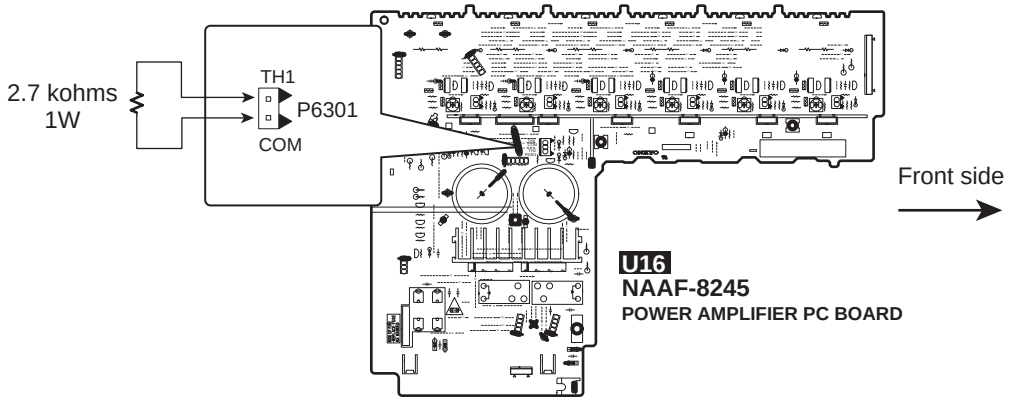
FM STEREO

6. Press the STANDBY/ON button, and exit from test mode.

Thermal detection

1. Set the unit to test mode *" Test-3-2 "*
Refer to the clause of "Output level detection".

2. Connect the resistor 2.7 kohms /1W between " HT1 " and " COM " terminals of P6301.



3. Check that FM STEREO indicator is display come out.

FM STEREO *Test - 3-02*

FM STEREO

6. Press the STANDBY/ON button, and exit from test mode.

OPERATION CHECK-4

DSP DEBUG MODE

Regarding the DSP debug mode

TIn this test mode, the check with normal communication of a microprocessor and the data of DSP and DIR is possible. This information is a help to find the cause of failure.

<How to go in DSP debug mode>

1. Press and hold down the DISPLAY button, then press the STANDBY/ON button when the unit is power ON.

[Example] | *Version 04212a* |

2. Press the DISPLAY button, while the display of *" Version 04212a "* has come out.

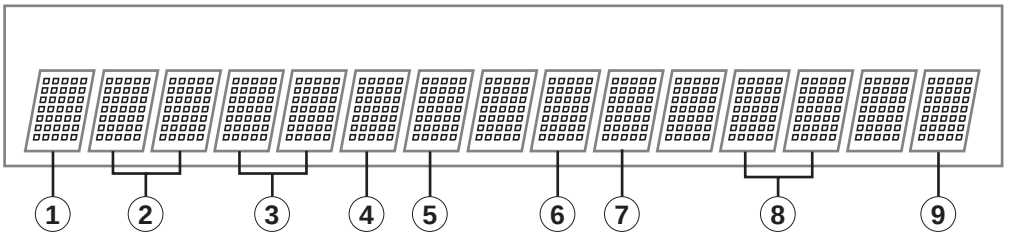
| *DSP Debug Mode* | → | *E1A---0 -o 23 o* |

<How to Exit>

Press STANDBY/ON button.

<Explanation of each parameter>

Details of FL display



DIR

① UNLOCK
- E = UNLOCK
- = LOCK

② Digital Selector
- D = DIGITAL
- A = ANALOG
- 1 = COAX
- 2 = OPT1
- 3 = OPT2
- 4 = Others

③ Sampling Frequency
- 96 = 96kHz
- 48 = 48kHz
- 44 = 44kHz
- 32 = 32kHz
- = Not detect

④ Pre Emphasis
- K = OFF
- e = ON

⑤ DIR Status
- 0 = PCM/ANALOG
- 2 = DTS CD
- 5 = DD/DTS/AAC

MEMORY/DOWNLOAD

⑥ MEMORY Address
- 0 = AC3+PLII
- 1 = AC3/PCM+T-D
- 2 = DTS/DTS-ES
- 3 = DTS
- 5 = AAC+PL"6" : COS
- 7 = FACTORY TEST MODE

⑦ ROM/RAM Select/Download Status
- H = RAM (Complete Auto Boot)
- L = ROM (Under Auto boot)

DSP

⑧ DSP Detect Format

[IEC61937]
- 00: Null
- 01: Dolby Digital
- 03: Pause
- 04: MPEG1 L1
- 05: MPEG1 L23/MPEG2 w/o
- 06: MPEG2 w/o
- 07: MPEG2 AAC
- 0B: DTS1
- 0C: DTS2
- 0D: DTS3
- 1B: MPEG2 AAC1
- 1C: MPEG2 AAC2

[Except IEC61937]
- 20: Silent
- 21: DTS LD
- 22: DTS CD
- 23: PCM

⑨ DSP Decode
- 0 = Decode OK
- X = Decode NG
- - = Analog in

HT-R8230

EXPLODED VIEW PARTS LIST

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ! ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

	REF. NO.	PART NAME	DESCRIPTION	Q'TY	PART NO.	REMARKS
EXPLODED	A002	SCREW	3TTF+8B(BC)	2	835430088	
EXPLODED	A004	SCREW	3TTB+8B	1	838130088	
EXPLODED	A005	SCREW	3TTB+10B(BC)	10	838430108	
EXPLODED	A007	SCREW	3TTB+10B(BC)	3	838430108	
EXPLODED	A010	CHASSIS	---	1	27100416A	
EXPLODED	A015	HOLDER	KGLS-8RT	1	27190503A	
EXPLODED	A016	HOLDER	KGPS-10RF	2	27190813	
EXPLODED	A017	HOLDER	KGLS-10RT	3	27190428A	
EXPLODED	A020	SCREW	3TTB+8B	6	838130088	
EXPLODED	A021	SCREW	3TTB+8B	4	838130088	
EXPLODED	A022	SCREW	3TTB+8B	1	838130088	
EXPLODED	A023	SCREW	4TTC+8C(BC)	4	830440089	
EXPLODED	A024	SCREW	3TTB+8B	1	838130088	
EXPLODED	A025	RIVET	P-RIVET NRP-345	1	880009	
EXPLODED	A026	SCREW	3TTW+8B(BC)	1	831430088	
EXPLODED	A028	BUSHING	S-RELIEF #2271	1	27300750	!
EXPLODED	A030	HEAT SINK	AS	1	27160501	
EXPLODED	A035	SCREW	3TTB+8B	1	838130088	
EXPLODED	A036	SCREW	3TTB+8B	2	838130088	
EXPLODED	A037	SCREW	3SMS8W.SW+14B(BC)	10	801433	
EXPLODED	A050	COVER	---	1	28184906	
EXPLODED	A051	SCREW	3TTB+8B(UN)	6	838930088	
EXPLODED	A055	LEG	LEG	4	27175319B	
EXPLODED	A056	CUSHION	---	8	28141494	
EXPLODED	A057	SCREW	3TTB+8B	4	838130088	
EXPLODED	A060	KNOB	(VOL)AS	1	28326255	
EXPLODED	A065	CLEAR PLT	(S)	1	28192046	
EXPLODED	A401	REAR PANEL	---	1	27123354	
EXPLODED	A404	SCREW	3TTB+8B(BC)	24	838430088	
EXPLODED	A410	F PANEL	---	1	27212709	
EXPLODED	A411	KNOB	(POW)	1	28326250	
EXPLODED	A412	KNOB	(MODE)	1	28326254	
EXPLODED	A413	KNOB	(SEL)	1	28326252	
EXPLODED	A414	KNOB	(PRE)	1	28326253	
EXPLODED	A415	TAPE	(CU)	1	29110161	
EXPLODED	A416	TAPE	(CU)	2	29110170	
EXPLODED	A417	TAPE	(CU)	1	29110171	
EXPLODED	A418	TAPE	(CU)	1	29110172	
EXPLODED	A420	BADGE	---	1	28135290	
EXPLODED	A421	SCREW	3TTW+8B(BC)	3	831430088	
EXPLODED	A435	LABEL	(POP)	1	29363971	
EXPLODED	F6901	FUSE	8A-UL	1	252198	!
EXPLODED	F6901 or	FUSE	8A-T/UL-ST2	(1)	252261	!

EXPLODED	F6902	FUSE	8A-UL	1	252198	!
EXPLODED	F6902 or	FUSE	8A-T/UL-ST2	(1)	252261	!
EXPLODED	F901	FUSE	8A-UL	1	252198	!
EXPLODED	F901 or	FUSE	8A-T/UL-ST2	(1)	252261	!
EXPLODED	F903	FUSE	5A-UL/T-237	1	252164	!
EXPLODED	F903 or	FUSE	5A-T/UL-ST2	(1)	252258	!
EXPLODED	P101	FFC	NCFC7-151512	1	2047151512	
EXPLODED	P7502	FFC	NCFC5-102012	1	2045102012	
EXPLODED	P7503	FFC	NCFC7-081012	1	2047081012	
EXPLODED	P800	WIRE TIE	BSK-1	8	260208	
EXPLODED	P901	AC CORD	AS-UC-2	1	253368LTK	!
EXPLODED	P901 or	AC CORD	AS-UC-2	(1)	253332HIT	!
EXPLODED	P901 or	AC CORD	AS-UC-2	(1)	253333VOL	!
EXPLODED	Q6050	TR	2SC5242-O	1	2202843	
EXPLODED	Q6050 or	TR	2SC5242-R	(1)	2202842	
EXPLODED	Q6050 or	TR	MN150S-Y	(1)	2203684	
EXPLODED	Q6050 or	TR	MN150S-P	(1)	2203686	
EXPLODED	Q6050 or	TR	MN150S-O	(1)	2203683	
EXPLODED	Q6050A	ISO SHEET	AC238	10	223024	
EXPLODED	Q6051	TR	2SC5242-O	1	2202843	
EXPLODED	Q6051 or	TR	2SC5242-R	(1)	2202842	
EXPLODED	Q6051 or	TR	MN150S-Y	(1)	2203684	
EXPLODED	Q6051 or	TR	MN150S-P	(1)	2203686	
EXPLODED	Q6051 or	TR	MN150S-O	(1)	2203683	
EXPLODED	Q6052	TR	MN130S-Y	1	2203664	
EXPLODED	Q6052 or	TR	MN130S-P	(1)	2203666	
EXPLODED	Q6052 or	TR	MN130S-O	(1)	2203663	
EXPLODED	Q6052 or	TR	2SC5242-O	(1)	2202843	
EXPLODED	Q6052 or	TR	2SC5242-R	(1)	2202842	
EXPLODED	Q6053	TR	MN130S-Y	1	2203664	
EXPLODED	Q6053 or	TR	MN130S-P	(1)	2203666	
EXPLODED	Q6053 or	TR	MN130S-O	(1)	2203663	
EXPLODED	Q6053 or	TR	2SC5242-O	(1)	2202843	
EXPLODED	Q6053 or	TR	2SC5242-R	(1)	2202842	
EXPLODED	Q6054	TR	MN130S-Y	1	2203664	
EXPLODED	Q6054 or	TR	MN130S-P	(1)	2203666	
EXPLODED	Q6054 or	TR	MN130S-O	(1)	2203663	
EXPLODED	Q6054 or	TR	2SC5242-O	(1)	2202843	
EXPLODED	Q6054 or	TR	2SC5242-R	(1)	2202842	
EXPLODED	Q6060	TR	2SA1962-O	1	2202833	
EXPLODED	Q6060 or	TR	2SA1962-R	(1)	2202832	
EXPLODED	Q6060 or	TR	MP150S-Y	(1)	2203694	
EXPLODED	Q6060 or	TR	MP150S-P	(1)	2203696	
EXPLODED	Q6060 or	TR	MP150S-O	(1)	2203693	
EXPLODED	Q6061	TR	2SA1962-O	1	2202833	
EXPLODED	Q6061 or	TR	2SA1962-R	(1)	2202832	
EXPLODED	Q6061 or	TR	MP150S-Y	(1)	2203694	
EXPLODED	Q6061 or	TR	MP150S-P	(1)	2203696	
EXPLODED	Q6061 or	TR	MP150S-O	(1)	2203693	
EXPLODED	Q6062	TR	MP130S-Y	1	2203674	
EXPLODED	Q6062 or	TR	MP130S-P	(1)	2203676	
EXPLODED	Q6062 or	TR	MP130S-O	(1)	2203673	
EXPLODED	Q6062 or	TR	2SA1962-O	(1)	2202833	
EXPLODED	Q6062 or	TR	2SA1962-R	(1)	2202832	
EXPLODED	Q6063	TR	MP130S-Y	1	2203674	

EXPLODED	Q6063 or	TR	MP130S-P	(1)	2203676	
EXPLODED	Q6063 or	TR	MP130S-O	(1)	2203673	
EXPLODED	Q6063 or	TR	2SA1962-O	(1)	2202833	
EXPLODED	Q6063 or	TR	2SA1962-R	(1)	2202832	
EXPLODED	Q6064	TR	MP130S-Y	1	2203674	
EXPLODED	Q6064 or	TR	MP130S-P	(1)	2203676	
EXPLODED	Q6064 or	TR	MP130S-O	(1)	2203673	
EXPLODED	Q6064 or	TR	2SA1962-O	(1)	2202833	
EXPLODED	Q6064 or	TR	2SA1962-R	(1)	2202832	
EXPLODED	T901	P TRANS	NPT-1491D	1	2301738	!
EXPLODED	U01	PREAMPLIFIER PCB ASSY	NADG-7401-3E	1	1A978501-3E	
EXPLODED	U02	DISPLAY PCB ASSY	NADIS-7403-3B	1	1A978503-3B	
EXPLODED	U03	SWITCH PCB ASSY	NASW-7404-3B	1	1A978504-3B	
EXPLODED	U04	HEADPHONE JACK PCB ASSY	NAETC-7405-3B	1	1A978505-3B	
EXPLODED	U08	DRIVER AMPLIFIER PCB ASSY	NAAF-7866-3A	1	1A978566-3A	
EXPLODED	U09	VIDEO & OPT TERMINAL PCB ASSY	NAVD-7867-3A	1	1A978567-3A	
EXPLODED	U10	REGULATOR PCB ASSY	NAETC-7868-3A	1	1A978568-3A	
EXPLODED	U11	TERMINAL PCB ASSY	NAETC-7869-3A	1	1A978569-3A	
EXPLODED	U12	SPEAKER TERMINAL PCB ASSY	NAETC-7870-3A	1	1A978570-3A	
EXPLODED	U17	POWER AMPLIFIER PCB ASSY	NAAF-7875-2B	1	1A978575-2B	
EXPLODED	U18	TERMINAL PCB ASSY	NAPS-7876-2B	1	1A978576-2B	
EXPLODED	U19	POWER SUPPLY PCB ASSY	NAPS-7877-2B	1	1A978577-2B	
EXPLODED	U20	TERMINAL PCB ASSY	NAPS-7878-2B	1	1A978578-2B	
EXPLODED	U23	HOLDER PCB ASSY	NAETC-7881-2B	1	1A978581-2B	
EXPLODED	U25	TERMINAL PCB ASSY	NAETC-7884-2B	1	1A978584-2B	
EXPLODED	U26	THERMAL SENSOR PCB ASSY	NAETC-7856-2B	1	1A978556-2B	
EXPLODED	U27	TUNER UNIT	TFCE1U114B	1	240134A	
EXPLODED	U27 or	TUNER UNIT	FAE385-A02F	(1)	240146	
EXPLODED	U27 or	TUNER UNIT	ENG06501QR	(1)	240138A	
EXPLODED	**<Notes>**					
EXPLODED	When replacement the following the transistor,made from the same HE rank as the original type.					
EXPLODED	Q6050 - Q6054, Q6060 - Q6064					

PRINTED CIRCUIT BOARD PARTS LIST

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK ! ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

U1 PREAMPLIFIER PC BOARD (NADG-7401-3E)

	CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO.	REMARKS
PWB	Q301	IC	BD3811K1	1	22241761R3	
PWB	Q302	IC	NJM4565M-D	1	22241383R2	
PWB	Q302 or	IC	MPC4570G2-T1(MST)	(1)	22240489R1NE	
PWB	Q302 or	IC	NJM4565M	(1)	22240581R2	
PWB	Q305	IC	NJM4565M-D	1	22241383R2	
PWB	Q305 or	IC	MPC4570G2-T1(MST)	(1)	22240489R1NE	
PWB	Q305 or	IC	NJM4565M	(1)	22240581R2	
PWB	Q306	TR	RN2402	1	2214530R2	
PWB	Q306 or	TR	KRA102S	(1)	2216220R2	
PWB	Q307	TR	RN1441	1	2215410R2	
PWB	Q308	TR	RN1441	1	2215410R2	

PWB	Q312	TR	RN1441	1	2215410R2
PWB	Q313	TR	RN1441	1	2215410R2
PWB	Q321	IC(REGULATOR)	78L07(SMT)	1	222780073R2
PWB	Q322	IC(REGULATOR)	79L07(SMT)	1	222790073R2
PWB	Q701	IC	CS493264	1	22241762R2
PWB	Q707	IC	TC7WU04FU	1	22240935R2
PWB	Q801	IC	AK4586	1	22241620R3
PWB	Q802	IC	NJM4565M-D	1	22241383R2
PWB	Q802 or	IC	MPC4570G2-T1(MST)	(1)	22240489R1NE
PWB	Q802 or	IC	NJM4565M	(1)	22240581R2
PWB	Q803	IC	NJM4565M-D	1	22241383R2
PWB	Q803 or	IC	MPC4570G2-T1(MST)	(1)	22240489R1NE
PWB	Q803 or	IC	NJM4565M	(1)	22240581R2
PWB	Q804	IC	NJM4565M-D	1	22241383R2
PWB	Q804 or	IC	MPC4570G2-T1(MST)	(1)	22240489R1NE
PWB	Q804 or	IC	NJM4565M	(1)	22240581R2
PWB	Q6402	IC(REGURATOR)	7812HF(TA7812S)	1	222780124TOS
PWB	Q6402 or	IC(REGULATOR)	78M12HF	(1)	222780125
PWB	Q6402A	SCREW	3P+10FN(BC)	1	82143010
PWB	Q6402B	HEAT SINK	RAD-183	1	27160526
PWB	Q6402C	TAPE	TAPE(CLOTH-16U)	1	29110083
PWB	Q6403	IC(REGURATOR)	79012HF(TA79012S)	1	222790124TOS
PWB	Q6403 or	IC(REGULATOR)	79M12HF	(1)	222790125
PWB	Q6405	IC(REGURATOR)	7812HF(TA7812S)	1	222780124TOS
PWB	Q6405 or	IC(REGULATOR)	78M12HF	(1)	222780125
PWB	Q6405A	SCREW	3P+10FN(BC)	1	82143010
PWB	Q6406	IC(REGURATOR)	7805HF(TA7805S)	1	222780054TOS
PWB	Q6406 or	IC(REGULATOR)	78M05HF	(1)	222780055
PWB	Q6406A	SCREW	3P+10FN(BC)	1	82143010
PWB	Q7001	TR	RN1404	1	2214490R2
PWB	Q7001 or	TR	KRC104S	(1)	2216210R2
PWB	Q7002	IC	TC74VHC541FT	1	22274541ER2TO
PWB	Q7002 or	IC	SN74AHC541PWR	(1)	22274541IR2TI
PWB	Q7003	IC	TC74HCT7007AF	1	222740077R2TO
PWB	Q7004	IC	BA33C25FP	1	22241778R2
PWB	Q7006	TR	RN1404	1	2214490R2
PWB	Q7006 or	TR	KRC104S	(1)	2216210R2
PWB	Q7007	TR	RN1404	1	2214490R2
PWB	Q7007 or	TR	KRC104S	(1)	2216210R2
PWB	Q7008	IC	MPD784225GC-249-8BT	1	22242149R3
PWB	Q9501	TR	2SA1015-GR	1	2211455
PWB	D801	C-DIODE	1SS352	1	223234R2
PWB	D801 or	C-DIODE	1SS355	(1)	223269R2
PWB	D802	C-DIODE	1SS352	1	223234R2
PWB	D802 or	C-DIODE	1SS355	(1)	223269R2
PWB	D7001	C-DIODE	1SS352	1	223234R2
PWB	D7001 or	C-DIODE	1SS355	(1)	223269R2
PWB	D7002	C-DIODE	1SS352	1	223234R2
PWB	D7002 or	C-DIODE	1SS355	(1)	223269R2
PWB	D7003	C-DIODE	1SS352	1	223234R2
PWB	D7003 or	C-DIODE	1SS355	(1)	223269R2
PWB	D7004	C-DIODE	1SS352	1	223234R2
PWB	D7004 or	C-DIODE	1SS355	(1)	223269R2
PWB	D7702	ZENER D	UDZS6.2B	1	224550620R2
PWB	D7702 or	ZENER D	UDZ6.2B	(1)	224490620R2

PWB	D7702 or	ZENER D	HZU6.2B	(1)	224660624R2
PWB	D9502	DIODE	RL1N4003	1	22380260
PWB	D9502 or	DIODE	GP104003E	(1)	22380035
PWB	D9502 or	DIODE	1SR139-100	(1)	22380032
PWB	D9503	DIODE	RL1N4003	1	22380260
PWB	D9503 or	DIODE	GP104003E	(1)	22380035
PWB	D9503 or	DIODE	1SR139-100	(1)	22380032
PWB	D9504	DIODE	RL1N4003	1	22380260
PWB	D9504 or	DIODE	GP104003E	(1)	22380035
PWB	D9504 or	DIODE	1SR139-100	(1)	22380032
PWB	D9505	DIODE	RL1N4003	1	22380260
PWB	D9505 or	DIODE	GP104003E	(1)	22380035
PWB	D9505 or	DIODE	1SR139-100	(1)	22380032
PWB	D9506	DIODE	RL1N4003	1	22380260
PWB	D9506 or	DIODE	GP104003E	(1)	22380035
PWB	D9506 or	DIODE	1SR139-100	(1)	22380032
PWB	D9507	DIODE	RL1N4003	1	22380260
PWB	D9507 or	DIODE	GP104003E	(1)	22380035
PWB	D9507 or	DIODE	1SR139-100	(1)	22380032
PWB	D9508	ZENER D	UDZS27B	1	224552700R2
PWB	D9508 or	ZENER D	UDZ27B	(1)	224492700R2
PWB	D9508 or	ZENER D	HZU27B	(1)	224662704R2
PWB	D9509	DIODE	RL1N4003	1	22380260
PWB	D9509 or	DIODE	GP104003E	(1)	22380035
PWB	D9509 or	DIODE	1SR139-100	(1)	22380032
PWB	D9510	DIODE	RL1N4003	1	22380260
PWB	D9510 or	DIODE	GP104003E	(1)	22380035
PWB	D9510 or	DIODE	1SR139-100	(1)	22380032
PWB	D9511	DIODE	RL1N4003	1	22380260
PWB	D9511 or	DIODE	GP104003E	(1)	22380035
PWB	D9511 or	DIODE	1SR139-100	(1)	22380032
PWB	D9512	DIODE	RL1N4003	1	22380260
PWB	D9512 or	DIODE	GP104003E	(1)	22380035
PWB	D9512 or	DIODE	1SR139-100	(1)	22380032
PWB	L701	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L701 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L702	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L702 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L704	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L704 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L705	EMIFIL	BK1608LM182-T	1	230958R1
PWB	L706	EMIFIL	BK1608LM182-T	1	230958R1
PWB	L801	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L801 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L802	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L802 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L803	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L803 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L804	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L804 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	L7001	CHOKE COIL	NCH-1479	1	231237K470R2
PWB	L7001 or	CHOKE COIL	NCH-1587-470K	(1)	233533K470R2
PWB	L7002	CHOKE COIL	NCH-1471	1	231237M022R2
PWB	L7002 or	CHOKE COIL	NCH-1587-022K	(1)	233533K022R2
PWB	X7001	CERA LOCK	CSTCE12M5G52-R0	1	3010361R2

PWB	X701	CERA LOCK	CSTCV12.2MTJ0C4	1	3010324R2
PWB	C101	VR C	CE04W50V-3.3M(VR)	1	394680337
PWB	C101 or	ELECT C	CE04W50V3.3M(SC)	(1)	394780337
PWB	C103	VR C	CE04W50V-3.3M(VR)	1	394680337
PWB	C103 or	ELECT C	CE04W50V3.3M(SC)	(1)	394780337
PWB	C104	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C106	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C300	TF C	ECQ-B50V-101K	1	374721015
PWB	C301	TF C	ECQ-B50V-101K	1	374721015
PWB	C302	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C303	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C304	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C305	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C306	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C307	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C308	CERA C	CK45F50V-103Z	1	335621030
PWB	C310	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C311	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C312	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C313	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C314	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C315	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C316	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C317	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C318	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C319	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C320	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C321	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C322	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C323	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C325	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C326	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C327	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C328	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C329	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C330	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C331	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C332	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C333	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C334	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C335	C-FILM C	ECHU16V-332J	1	373043324R2
PWB	C336	C-FILM C	ECHU16V-332J	1	373043324R2
PWB	C338	C-FILM C	ECHU16V-563J	1	373045634R2
PWB	C340	C-FILM C	ECHU16V-563J	1	373045634R2
PWB	C347	VR C	CE04W16V-100M(VR)	1	394641017
PWB	C347 or	ELECT C	CE04W16V100M(SC)	(1)	394741017
PWB	C348	VR C	CE04W16V-100M(VR)	1	394641017
PWB	C348 or	ELECT C	CE04W16V100M(SC)	(1)	394741017
PWB	C349	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C350	C-CERA C	CC725CH1H-221J1	1	342102214R1
PWB	C351	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C352	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C353	VX C	CE04W16V-47M(VX)	1	393344707
PWB	C354	VX C	CE04W16V-47M(VX)	1	393344707
PWB	C358	VX C	CE04W16V-47M(VX)	1	393344707

PWB	C359	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C359 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C360	C-CERA C	CK732B1C-474K	1	337394745R1
PWB	C362	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C362 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C363	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C364	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C365	C-CERA C	CC732CH1H-222J	1	347342224R2
PWB	C366	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C367	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C703	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C706	VR C	CE04W6.3V-100M(VR)	1	394621017
PWB	C706 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017
PWB	C707	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C708	C-CERA C	CK725B1H-103K1	1	332101035R1
PWB	C709	C-CERA C	CK732B1A-105K	1	337361055R2
PWB	C710	C-CERA C	CK732B1A-105K	1	337361055R2
PWB	C711	C-CERA C	CC725CH1H-471J1	1	342104714R1
PWB	C712	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C713	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C714	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C715	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C716	VR C	CE04W6.3V-100M(VR)	1	394621017
PWB	C716 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017
PWB	C800	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C801	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C801 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C804	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C805	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C806	VR C	CE04W6.3V-470M(VR)	1	394624717
PWB	C806 or	ELECT C	CE04W6.3V470M(SC)	(1)	394724717
PWB	C807	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C808	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C809	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C809 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C810	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C810 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C811	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C812	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C813	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C814	C-CERA C	CC725CH1H-330J1	1	342103304R1
PWB	C815	C-CERA C	CC725CH1H-102J1	1	342101024R1
PWB	C816	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C817	C-CERA C	CC725CH1H-150J1	1	342101504R1
PWB	C832	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C833	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C834	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C835	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C836	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C837	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C840	C-CERA C	CC725CH1E-821J1	1	342118214R1
PWB	C841	C-FILM C	ECHU16V-822J	1	373048224R2
PWB	C842	C-CERA C	CC725CH1E-821J1	1	342118214R1
PWB	C843	C-CERA C	CC725CH1E-821J1	1	342118214R1
PWB	C844	C-CERA C	CC725CH1E-821J1	1	342118214R1

PWB	C845	C-CERA C	CC725CH1E-821J1	1	342118214R1
PWB	C848	C-CERA C	CC732CH1H-152J	1	347341524R1
PWB	C849	C-FILM C	ECHU16V-153J	1	373041534R2
PWB	C850	C-CERA C	CC732CH1H-152J	1	347341524R1
PWB	C851	C-CERA C	CC732CH1H-152J	1	347341524R1
PWB	C852	TF C	ECQ-B50V-152J	1	374721524
PWB	C853	TF C	ECQ-B50V-152J	1	374721524
PWB	C854	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C855	VX C	CE04W16V-47M(VX)	1	393344707
PWB	C856	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C857	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C858	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C859	VX C	CE04W16V-10M(VX)	1	393341007
PWB	C6401	TF C	ECQ-V50V-104J	1	374721044
PWB	C6403	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	C6404	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C6404 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C6405	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	C6406	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C6406 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C6409	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	C6410	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C6410 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C6411	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	C6412	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C6412 or	ELECT C	CE04W16V10M(SC)	(1)	394741007
PWB	C7001	EDL C	DX-5R5L104	1	3000078
PWB	C7001 or	EDL C	FMC0H104Z	(1)	3000120
PWB	C7001 or	EDL C	SCDA5R5104A	(1)	3000121
PWB	C7002	VR C	CE04W6.3V-100M(VR)	1	394621017
PWB	C7002 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017
PWB	C7003	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7004	VR C	CE04W50V-1M(VR)	1	394680107
PWB	C7004 or	ELECT C	CE04W50V1.0M(SC)	(1)	394780107
PWB	C7005	VR C	CE04W6.3V-100M(VR)	1	394621017
PWB	C7005 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017
PWB	C7006	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7007	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7008	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7009	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7010	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7011	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C7011 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C7012	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C7012 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C7014	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7015	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C7015 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C9501	TF C	ECQ-V50V-104J	1	374721044
PWB	C9502	TF C	ECQ-V50V-104J	1	374721044
PWB	C9503	TF C	ECQ-V50V-104J	1	374721044
PWB	C9505	VR C	CE04W35V-2200M(VR)	1	394662227S
PWB	C9505 or	ELECT C	CE04W35V2200M(SC)	(1)	394762227S
PWB	C9506	VR C	CE04W35V-470M(VR)	1	394664717
PWB	C9506 or	ELECT C	CE04W35V470M(SC)	(1)	394764717

PWB	C9507	VR C	CE04W35V-220M(VR)	1	394662217
PWB	C9507 or	ELECT C	CE04W35V220M(SC)	(1)	394762217
PWB	C9508	VR C	CE04W16V-4700M(VR)	1	394644727S
PWB	C9508 or	ELECT C	CE04W16V4700M(SC)	(1)	394744727S
PWB	C9510	VR C	CE04W63V-220M(VR)	1	394672217
PWB	C9511	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	C9512	C-CERA C	CK725F1H-223Z1	1	332152230R1
PWB	R102	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R103	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R104	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R185	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R186	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R187	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R300	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R301	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R302	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R303	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R304	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R305	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R306	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R307	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R310	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R311	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R312	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R313	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R314	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R315	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R316	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R317	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R318	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R319	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R320	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R321	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R330	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R331	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R347	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R348	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R359	C-CARBON R	RN72K1J-271JE	1	435032714R1
PWB	R360	C-CARBON R	RN72K1J-271JE	1	435032714R1
PWB	R361	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R362	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R363	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R364	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R367	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R368	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R369	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R370	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R373	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R374	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R375	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R376	C-CARBON R	RN72K1J-271JE	1	435032714R1
PWB	R377	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R378	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R379	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R380	C-CARBON R	RN72K1J-223JE	1	435032234R1

PWB	R381	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R382	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R383	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R384	C-CARBON R	RN72K1J-224JE	1	435032244R1
PWB	R385	C-CARBON R	RN72K1J-101JE	1	435031014R1
PWB	R386	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R387	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R388	C-CARBON R	RN72K1J-101JE	1	435031014R1
PWB	R701	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R702	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R703	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R704	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R705	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R706	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R707	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R708	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R709	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R710	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R711	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R712	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R713	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R714	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R715	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R716	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R717	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R718	C-CARBON R	RN72K1J-333JE	1	435033334R1
PWB	R719	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R720	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R721	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R722	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R723	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R724	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R725	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R726	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R727	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R728	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R729	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R739	C-CARBON R	RN72K1J-105JE	1	435031054R1
PWB	R803	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R804	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R805	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R806	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R807	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R808	C-CARBON R	RN72K1J-470JE	1	435034704R1
PWB	R809	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R810	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R811	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R812	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R813	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R814	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R815	C-CARBON R	RN72K1J-183JE	1	435031834R1
PWB	R816	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R817	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R818	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R819	C-CARBON R	RN72K1J-331JE	1	435033314R1

PWB	R820	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R821	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R832	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R833	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R834	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R835	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R836	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R837	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R840	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R841	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R842	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R843	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R844	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R845	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R848	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R849	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R850	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R851	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R852	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R853	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R6402	METAL O R	RS1/2WBJ-10	1	442521004F
PWB	R6403	METAL O R	RS1/2WBJ-33	1	442523304F
PWB	R6407	METAL R	RNU1WCJ-3.3	1	452630334F
PWB	R6410	METAL R	RNU1/2WCJ-2.2	1	453530224
PWB	R7000	C-CARBON R	RN72K1J-101JE	1	435031014R1
PWB	R7001	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7002	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7003	C-CARBON R	RN72K1J-000JE	1	435030004R1
PWB	R7011	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7012	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7015	C-CARBON R	RN72K1J-820JE	1	435038204R1
PWB	R7016	C-CARBON R	RN72K1J-820JE	1	435038204R1
PWB	R7017	C-CARBON R	RN72K1J-820JE	1	435038204R1
PWB	R7018	C-CARBON R	RN72K1J-820JE	1	435038204R1
PWB	R7019	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7020	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7021	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7022	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7023	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7024	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7025	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7026	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7027	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7028	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7029	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7030	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7033	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R7034	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R7035	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7036	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7037	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7038	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7039	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7040	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7041	C-CARBON R	RN72K1J-103JE	1	435031034R1

PWB	R7042	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7043	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7044	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7045	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7046	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7047	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7048	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7049	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7050	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7051	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7052	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7053	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7054	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7055	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7056	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7057	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7058	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7059	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7060	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R7062	C-CARBON R	RN72K1J-224JE	1	435032244R1
PWB	R7063	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7064	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7065	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7066	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7067	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7068	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7069	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7070	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7071	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7072	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7073	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7074	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7075	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7076	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7077	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7078	C-CARBON R	RN72K1J-333JE	1	435033334R1
PWB	R7079	C-CARBON R	RN72K1J-333JE	1	435033334R1
PWB	R7080	C-CARBON R	RN72K1J-333JE	1	435033334R1
PWB	R7081	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7082	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7083	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7084	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7085	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7120	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7134	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7138	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R7178	C-CARBON R	RN72K1J-563JE	1	435035634R1
PWB	R7179	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7180	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7839	C-CARBON R	RN72K1J-223JE	1	435032234R1
PWB	R9506	METAL O R	RS1/2WBJ-22	1	443522204
PWB	R9507	C-CARBON R	RN72K1J-153JE	1	435031534R1
PWB	R9508	C-CARBON R	RN72K1J-153JE	1	435031534R1
PWB	R9509	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	P101	SOCKET	NSCT-15P2108	1	25052211

PWB	P101 or	SOCKET	NSCT-15P1811	(1)	25052024
PWB	P301	PIN JACK	NPJ-6PDRW386	1	25045571
PWB	P301 or	JACK	NPJ-6PDBL159	(1)	25045300
PWB	P301 or	PIN JACK	NPJ-6PDWWWRRR561	(1)	25045779
PWB	P302	JACK	NPJ-2PDBL185	1	25045333
PWB	P302 or	PIN JACK	NPJ-2PDWR558	(1)	25045776
PWB	P304	PIN JACK	NPJ-6PDRW386	1	25045571
PWB	P304 or	JACK	NPJ-6PDBL159	(1)	25045300
PWB	P304 or	PIN JACK	NPJ-6PDWWWRRR561	(1)	25045779
PWB	P305	PIN JACK	NPJ-6PWRLGGP493	1	25045697
PWB	P305 or	PIN JACK	NPJ-6PDWLGREP562	(1)	25045780
PWB	P306	SOCKET AS	NSAS-20P1004	1	2009990717UL
PWB	P351	PIN JACK	NPJ-1PDP510	1	25045720
PWB	P351 or	PIN JACK	NPJ-1PDP555	(1)	25045773
PWB	P410B	PLUG	NPLG-10P662	1	25055706
PWB	P411B	PLUG	NPLG-10P662	1	25055706
PWB	P412B	PLUG	NPLG-8P660	1	25055704
PWB	P6403	RETAINER	KANAGU	1	27141059
PWB	P7502B	SOCKET	NSCT-10P2473	1	25052576R2
PWB	P801	PLUG	NPLG-14P666	1	25055710
PWB	E300	RETAINER	KANAGU	1	27141059

U2 DISPLAY PC BOARD (NADIS-7403-3B)
U3 SWITCH PC BOARD (NASW-7404-3B)
U4 HEADPHONE JACK PC BOARD (NAETC-7405-3B)

<Note> The parts of each PC board are indicated collectively.

	CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO.	REMARKS
PWB	U7501	REMO SENS	SPS-444-1-VP	1	241352	
PWB	Q7501	FL TUBE	16BT123GK	1	212250	
PWB	Q7501A	HOLDER	(FL)	1	27190989B	
PWB	Q7502	IC	MPD780232GC-030-8BT	1	22241571R3	
PWB	Q7503	TR	KTC3875-GR	1	2216175R2	
PWB	Q7503 or	TR	2SC2712-GR	(1)	2213145R2	
PWB	Q7504	TR	KRA103S	1	2216230R2	
PWB	Q7504 or	TR	RN2403	(1)	2214540R2	
PWB	Q7506	TR	KRC102S	1	2216190R2	
PWB	Q7506 or	TR	RN1402	(1)	2214470R2	
PWB	D7501	ZENER D	UDZS8.2B	1	224550820R2	
PWB	D7501 or	ZENER D	UDZ8.2B	(1)	224490820R2	
PWB	D7501 or	ZENER D	HZU8.2B	(1)	224660824R2	
PWB	D7502	ZENER D	UDZS5.1B	1	224550510R2	
PWB	D7502 or	ZENER D	UDZ5.1B	(1)	224490510R2	
PWB	D7502 or	ZENER D	HZU5.1B	(1)	224660514R2	
PWB	D7503	C-DIODE	1SS355	1	223269R2	
PWB	D7503 or	C-DIODE	1SS352	(1)	223234R2	
PWB	D7505	LED	SLR-56VRTB7	1	225431	
PWB	D7505 or	LED	SEL4110R	(1)	225290	
PWB	D7507	C-DIODE	1SS355	1	223269R2	
PWB	D7507 or	C-DIODE	1SS352	(1)	223234R2	
PWB	L7504	CHOKE COIL	NCH-1477	1	231237K220R2	
PWB	L7505	CHOKE COIL	NCH-1477	1	231237K220R2	
PWB	X7501	CERA LOCK	CST5.00MGW	1	3010242	
PWB	C7501	C-CERA C	CK725F1E-104Z1	1	332161040R1	
PWB	C7502	ELECT C	CE04W50V-33M	1	355783309	

PWB	C7503	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7504	C-CERA C	CK725F1H-473Z1	1	332154730R1
PWB	C7505	C-CERA C	CK725F1H-473Z1	1	332154730R1
PWB	C7506	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7507	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7508	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7509	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7510	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7511	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7513	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7514	VR C	CE04W6.3V-100M(VR)	1	394621017
PWB	C7514 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017
PWB	C7515	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7516	C-CERA C	CK725F1E-104Z1	1	332161040R1
PWB	C7517	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7518	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7519	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7520	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	C7521	ELECT C	CE04W6.3V-220M	1	355722219
PWB	C7522	C-CERA C	CC725CH1H-101J1	1	342101014R1
PWB	C7523	C-CERA C	CC725CH1E-102J1	1	342111024R1
PWB	R7501	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7502	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7503	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7504	C-CARBON R	RN72K1J-473JE	1	435034734R1
PWB	R7505	C-CARBON R	RN72K1J-224JE	1	435032244R1
PWB	R7506	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7507	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7508	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7509	C-CARBON R	RN72K1J-472JE	1	435034724R1
PWB	R7510	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7511	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7512	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7513	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7514	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7515	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7516	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7517	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7518	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R7519	C-CARBON R	RN72K1J-104JE	1	435031044R1
PWB	R7520	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R7521	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R7522	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R7523	C-CARBON R	RN72K1J-272JE	1	435032724R1
PWB	R7524	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7526	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7527	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7528	C-CARBON R	RN72K1J-561JE	1	435035614R1
PWB	R7529	C-CARBON R	RN72K1J-561JE	1	435035614R1
PWB	R7530	C-CARBON R	RN72K1J-102JE	1	435031024R1
PWB	R7531	C-CARBON R	RN72K1J-221JE	1	435032214R1
PWB	R7532	C-CARBON R	RN72K1J-103JE	1	435031034R1
PWB	R7611	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R7612	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R7613	C-CARBON R	RN72K1J-561JE	1	435035614R1

PWB	R7614	C-CARBON R	RN72K1J-821JE	1	435038214R1
PWB	R7615	C-CARBON R	RN72K1J-122JE	1	435031224R1
PWB	R7621	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R7622	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R7623	C-CARBON R	RN72K1J-561JE	1	435035614R1
PWB	R7624	C-CARBON R	RN72K1J-821JE	1	435038214R1
PWB	R7625	C-CARBON R	RN72K1J-122JE	1	435031224R1
PWB	R7626	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7631	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R7632	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R7633	C-CARBON R	RN72K1J-561JE	1	435035614R1
PWB	R7634	C-CARBON R	RN72K1J-821JE	1	435038214R1
PWB	R7635	C-CARBON R	RN72K1J-122JE	1	435031224R1
PWB	R7636	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	R7641	C-CARBON R	RN72K1J-331JE	1	435033314R1
PWB	R7642	C-CARBON R	RN72K1J-471JE	1	435034714R1
PWB	R7643	C-CARBON R	RN72K1J-561JE	1	435035614R1
PWB	R7644	C-CARBON R	RN72K1J-821JE	1	435038214R1
PWB	R7645	C-CARBON R	RN72K1J-122JE	1	435031224R1
PWB	R7646	C-CARBON R	RN72K1J-222JE	1	435032224R1
PWB	P7501	ST JACK	YKB21-5005	1	25045724
PWB	P7502A	SOCKET	NSCT-10P1679	1	25051892
PWB	P7502Aor	SOCKET	NSCT-10P2428	(1)	25052531
PWB	P7503A	SOCKET	NSCT-8P1841	1	25052054
PWB	P7503Aor	SOCKET	NSCT-8P1639	(1)	25051852
PWB	P7503Aor	SOCKET	NSCT-8P2138	(1)	25052241
PWB	S7501	R ENCODE	EC12E2425	1	25065655
PWB	S7611	PUSH SW	NPS-111-S681	1	25035718
PWB	S7611 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7612	PUSH SW	NPS-111-S681	1	25035718
PWB	S7612 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7613	PUSH SW	NPS-111-S681	1	25035718
PWB	S7613 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7614	PUSH SW	NPS-111-S681	1	25035718
PWB	S7614 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7615	PUSH SW	NPS-111-S681	1	25035718
PWB	S7615 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7616	PUSH SW	NPS-111-S681	1	25035718
PWB	S7616 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7621	PUSH SW	NPS-111-S681	1	25035718
PWB	S7621 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7622	PUSH SW	NPS-111-S681	1	25035718
PWB	S7622 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7623	PUSH SW	NPS-111-S681	1	25035718
PWB	S7623 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7624	PUSH SW	NPS-111-S681	1	25035718
PWB	S7624 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7625	PUSH SW	NPS-111-S681	1	25035718
PWB	S7625 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7626	PUSH SW	NPS-111-S681	1	25035718
PWB	S7626 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7627	PUSH SW	NPS-111-S681	1	25035718
PWB	S7627 or	PUSH SW	NPS-111-S677	(1)	25035714
PWB	S7631	PUSH SW	NPS-111-S681	1	25035718
PWB	S7631 or	PUSH SW	NPS-111-S677	(1)	25035714

PWB	S7632	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7632 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7633	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7633 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7634	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7634 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7635	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7635 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7636	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7636 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7637	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7637 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7641	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7641 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7642	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7642 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7642 or	PUSH SW	NPS-111-S681	(1)	25035718	
PWB	S7643	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7643 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7644	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7644 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7645	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7645 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7646	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7646 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	S7647	PUSH SW	NPS-111-S681	1	25035718	
PWB	S7647 or	PUSH SW	NPS-111-S677	(1)	25035714	
PWB	JL7501A	WIRE HOL	NSCT-3P894	1	25051107	
PWB	JL7501B	WIRE HOL	NSCT-3P894	1	25051107	
PWB	JL7502A	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL7502B	WIRE HOL	NSCT-5P896	1	25051109	
PWB	E7501	RETAINER	KANAGU	1	27141059	

U8 DRIVER AMPLIFIER PC BOARD (NAAF-7866-3A)
U9 VIDEO & OPT TERMINAL PC BOARD (NAAF-7867-3A)
U10 REGULATOR PC BOARD (NAETC-7868-3A)
U11 TERMINAL PC BOARD (NAETC-7869-3A)
U12 SPEAKER TERMINAL PC BOARD (NAETC-7870-3A)

<Note> The parts of each PC board are indicated collectively.

	CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO.	REMARKS
PWB	Q921	TR	KTC3199-GR	1	2215864	
PWB	Q921 or	TR	2SC1740S-R	(1)	2213284	
PWB	Q921 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q921 or	TR	2SC2458-GR	(1)	2212115	
PWB	Q6010	TR	2SC1740S-R	1	2213284	
PWB	Q6010 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q6011	TR	2SC1740S-R	1	2213284	
PWB	Q6011 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q6012	TR	2SC1740S-R	1	2213284	
PWB	Q6012 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q6013	TR	2SC1740S-R	1	2213284	
PWB	Q6013 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q6014	TR	2SC1740S-R	1	2213284	
PWB	Q6014 or	TR	2SC1740S-S	(1)	2213285	
PWB	Q6020	TR	2SC1740S-R	1	2213284	

PWB	Q6020 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6021	TR	2SC1740S-R	1	2213284
PWB	Q6021 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6022	TR	2SC1740S-R	1	2213284
PWB	Q6022 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6023	TR	2SC1740S-R	1	2213284
PWB	Q6023 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6024	TR	2SC1740S-R	1	2213284
PWB	Q6024 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6030	TR	2SC5171	1	2203010
PWB	Q6031	TR	2SC5171	1	2203010
PWB	Q6032	TR	2SC5171	1	2203010
PWB	Q6033	TR	2SC5171	1	2203010
PWB	Q6034	TR	2SC5171	1	2203010
PWB	Q6040	TR	2SA1930	1	2203000
PWB	Q6041	TR	2SA1930	1	2203000
PWB	Q6042	TR	2SA1930	1	2203000
PWB	Q6043	TR	2SA1930	1	2203000
PWB	Q6044	TR	2SA1930	1	2203000
PWB	Q6070	TR	2SC2631-R	1	2214984
PWB	Q6070 or	TR	2SC2631-S	(1)	2214985
PWB	Q6071	TR	2SC2631-R	1	2214984
PWB	Q6071 or	TR	2SC2631-S	(1)	2214985
PWB	Q6072	TR	2SC2631-R	1	2214984
PWB	Q6072 or	TR	2SC2631-S	(1)	2214985
PWB	Q6073	TR	2SC2631-R	1	2214984
PWB	Q6073 or	TR	2SC2631-S	(1)	2214985
PWB	Q6074	TR	2SC2631-R	1	2214984
PWB	Q6074 or	TR	2SC2631-S	(1)	2214985
PWB	Q6303	TR	KTA1267-GR	1	2215995
PWB	Q6303 or	TR	2SA933S-R	(1)	2213354
PWB	Q6303 or	TR	2SA933S-S	(1)	2213355
PWB	Q6601	TR	KTC3199-GR	1	2215864
PWB	Q6601 or	TR	2SC1740S-R	(1)	2213284
PWB	Q6601 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6601 or	TR	2SC2458-GR	(1)	2212115
PWB	Q6602	TR	KTC3199-GR	1	2215864
PWB	Q6602 or	TR	2SC1740S-R	(1)	2213284
PWB	Q6602 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6602 or	TR	2SC2458-GR	(1)	2212115
PWB	Q6603	TR	KTC3199-GR	1	2215864
PWB	Q6603 or	TR	2SC1740S-R	(1)	2213284
PWB	Q6603 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6603 or	TR	2SC2458-GR	(1)	2212115
PWB	Q6701	TR	KTC3200-BL	1	2215896
PWB	Q6701 or	TR	KTC3200-GR	(1)	2215895
PWB	Q6701 or	TR	2SC1775A-E	(1)	2210755
PWB	Q6701 or	TR	2SC1775A-F	(1)	2210756
PWB	Q6701 or	TR	2SC1845-E	(1)	2211733
PWB	Q6701 or	TR	2SC1845-F	(1)	2211732
PWB	Q6702	TR	KTC3200-BL	1	2215896
PWB	Q6702 or	TR	KTC3200-GR	(1)	2215895
PWB	Q6702 or	TR	2SC1775A-E	(1)	2210755
PWB	Q6702 or	TR	2SC1775A-F	(1)	2210756
PWB	Q6702 or	TR	2SC1845-E	(1)	2211733

PWB	Q6702 or	TR	2SC1845-F	(1)	2211732
PWB	Q6703	TR	KTA1268-GR	1	2215885
PWB	Q6703 or	TR	KTA1268-BL	(1)	2215886
PWB	Q6703 or	TR	2SA992-E	(1)	2211793
PWB	Q6703 or	TR	2SA992-F	(1)	2211792
PWB	Q6901	TR	KTC3199-GR	1	2215864
PWB	Q6901 or	TR	2SC1740S-R	(1)	2213284
PWB	Q6901 or	TR	2SC1740S-S	(1)	2213285
PWB	Q6901 or	TR	2SC2458-GR	(1)	2212115
PWB	D921	DIODE	RL1N4003	1	22380260
PWB	D921 or	DIODE	GP104003E	(1)	22380035
PWB	D922	DIODE	RL1N4003	1	22380260
PWB	D922 or	DIODE	GP104003E	(1)	22380035
PWB	D923	DIODE	RL1N4003	1	22380260
PWB	D923 or	DIODE	GP104003E	(1)	22380035
PWB	D924	DIODE	RL1N4003	1	22380260
PWB	D924 or	DIODE	GP104003E	(1)	22380035
PWB	D925	DIODE	1SS133	1	223163
PWB	D925 or	DIODE	1SS270A	(1)	223205
PWB	D925 or	DIODE	WG713A	(1)	223222
PWB	D925 or	DIODE	1N4148M	(1)	223273
PWB	D6000	DIODE	1SS133	1	223163
PWB	D6000 or	DIODE	1SS270A	(1)	223205
PWB	D6000 or	DIODE	WG713A	(1)	223222
PWB	D6001	DIODE	1SS133	1	223163
PWB	D6001 or	DIODE	1SS270A	(1)	223205
PWB	D6001 or	DIODE	WG713A	(1)	223222
PWB	D6002	DIODE	1SS133	1	223163
PWB	D6002 or	DIODE	1SS270A	(1)	223205
PWB	D6002 or	DIODE	WG713A	(1)	223222
PWB	D6003	DIODE	1SS133	1	223163
PWB	D6003 or	DIODE	1SS270A	(1)	223205
PWB	D6003 or	DIODE	WG713A	(1)	223222
PWB	D6004	DIODE	1SS133	1	223163
PWB	D6004 or	DIODE	1SS270A	(1)	223205
PWB	D6004 or	DIODE	WG713A	(1)	223222
PWB	D6010	DIODE	1SS133	1	223163
PWB	D6010 or	DIODE	1SS270A	(1)	223205
PWB	D6010 or	DIODE	WG713A	(1)	223222
PWB	D6011	DIODE	1SS133	1	223163
PWB	D6011 or	DIODE	1SS270A	(1)	223205
PWB	D6011 or	DIODE	WG713A	(1)	223222
PWB	D6012	DIODE	1SS133	1	223163
PWB	D6012 or	DIODE	1SS270A	(1)	223205
PWB	D6012 or	DIODE	WG713A	(1)	223222
PWB	D6013	DIODE	1SS133	1	223163
PWB	D6013 or	DIODE	1SS270A	(1)	223205
PWB	D6013 or	DIODE	WG713A	(1)	223222
PWB	D6014	DIODE	1SS133	1	223163
PWB	D6014 or	DIODE	1SS270A	(1)	223205
PWB	D6014 or	DIODE	WG713A	(1)	223222
PWB	D6306	DIODE	1SS133	1	223163
PWB	D6306 or	DIODE	1SS270A	(1)	223205
PWB	D6306 or	DIODE	WG713A	(1)	223222
PWB	D6306 or	DIODE	1N4148M	(1)	223273

PWB	D6307	DIODE	1SS133	1	223163	
PWB	D6307 or	DIODE	1SS270A	(1)	223205	
PWB	D6307 or	DIODE	WG713A	(1)	223222	
PWB	D6307 or	DIODE	1N4148M	(1)	223273	
PWB	D6701	DIODE	1SS133	1	223163	
PWB	D6701 or	DIODE	1SS270A	(1)	223205	
PWB	D6701 or	DIODE	WG713A	(1)	223222	
PWB	D6701 or	DIODE	1N4148M	(1)	223273	
PWB	D6702	DIODE	1SS133	1	223163	
PWB	D6702 or	DIODE	1SS270A	(1)	223205	
PWB	D6702 or	DIODE	WG713A	(1)	223222	
PWB	D6702 or	DIODE	1N4148M	(1)	223273	
PWB	D6703	ZENER D	MTZJ5.1B	1	224470512	
PWB	D6703 or	ZENER D	DZ-5.1BSB	(1)	224850512	
PWB	D6704	ZENER D	MTZJ5.1B	1	224470512	
PWB	D6704 or	ZENER D	DZ-5.1BSB	(1)	224850512	
PWB	D6903	DIODE	D5SBA20	1	22380130F	
PWB	D6903 or	DIODE	RS603M-B42	(1)	22380274F	
PWB	D6903 or	DIODE	RBV602	(1)	22380038F	
PWB	D6904	DIODE	D5SBA20	1	22380130F	
PWB	D6904 or	DIODE	RS603M-B42	(1)	22380274F	
PWB	D6904 or	DIODE	RBV602	(1)	22380038F	
PWB	D6906	DIODE	1SS133	1	223163	
PWB	D6906 or	DIODE	1SS270A	(1)	223205	
PWB	D6906 or	DIODE	WG713A	(1)	223222	
PWB	D6906 or	DIODE	1N4148M	(1)	223273	
PWB	T902	P TRANS	NPT-1492D	1	2301739	!
PWB	C901	IS C	RE275V-103M	1	3500196S	!
PWB	C921	CERA C	CK45F50V-223Z	1	335622230	
PWB	C922	VR C	CE04W35V-220M(VR)	1	394662217	
PWB	C923	CERA C	CK45F50V-223Z	1	335622230	
PWB	C6040	VR C	CE04W50V-47M(VR)	1	394684707	
PWB	C6041	VR C	CE04W50V-47M(VR)	1	394684707	
PWB	C6042	VR C	CE04W50V-47M(VR)	1	394684707	
PWB	C6043	VR C	CE04W50V-47M(VR)	1	394684707	
PWB	C6044	VR C	CE04W50V-47M(VR)	1	394684707	
PWB	C6230	TF C	ECQ-V50V-473J	1	374724734	
PWB	C6231	TF C	ECQ-V50V-473J	1	374724734	
PWB	C6232	TF C	ECQ-V50V-473J	1	374724734	
PWB	C6233	TF C	ECQ-V50V-473J	1	374724734	
PWB	C6234	TF C	ECQ-V50V-473J	1	374724734	
PWB	C6701	VR C	CE04W6.3V-220M(VR)	1	394622217	
PWB	C6701 or	ELECT C	CE04W6.3V220M(SC)	(1)	394722217	
PWB	C6703	CERA C	CK45F50V-223Z	1	335622230	
PWB	C6704	VR C	CE04W50V-1M(VR)	1	394680107	
PWB	C6706	VR C	CE04W6.3V-100M(VR)	1	394621017	
PWB	C6706 or	ELECT C	CE04W6.3V100M(SC)	(1)	394721017	
PWB	C6708	TF C	ECQ-B50V-223J	1	374722234	
PWB	C6901	ELECT C	CE69W69V-10000M	1	3504404	
PWB	C6901 or	ELECT C	CE69W69V10000M	(1)	3504392	
PWB	C6902	ELECT C	CE69W69V-10000M	1	3504404	
PWB	C6902 or	ELECT C	CE69W69V10000M	(1)	3504392	
PWB	C6903	MY C	MY92-50V-104J	1	371121044	
PWB	C6904	TF C	ECQ-V100-334J	1	374733344	
PWB	C6905	TF C	ECQ-V100-334J	1	374733344	

PWB	C6906	MY C	MY92-50V-104J	1	371121044
PWB	C6907	MY C	MY92-50V-104J	1	371121044
PWB	R923	CARBON R	R16J-1K	1	417341024
PWB	R924	METAL O R	RS1/2WBJ-82	1	443528204
PWB	R926	CARBON R	R16J-4.7K	1	417344724
PWB	R6000	CARBON R	R16J-5.6K	1	417345624
PWB	R6001	CARBON R	R16J-5.6K	1	417345624
PWB	R6002	CARBON R	R16J-5.6K	1	417345624
PWB	R6003	CARBON R	R16J-5.6K	1	417345624
PWB	R6004	CARBON R	R16J-5.6K	1	417345624
PWB	R6010	CARBON R	R16J-3.9K	1	417343924
PWB	R6011	CARBON R	R16J-3.9K	1	417343924
PWB	R6012	CARBON R	R16J-3.9K	1	417343924
PWB	R6013	CARBON R	R16J-3.9K	1	417343924
PWB	R6014	CARBON R	R16J-3.9K	1	417343924
PWB	R6030	CARBON R	R16J-390	1	417343914
PWB	R6031	CARBON R	R16J-390	1	417343914
PWB	R6032	CARBON R	R16J-390	1	417343914
PWB	R6033	CARBON R	R16J-390	1	417343914
PWB	R6034	CARBON R	R16J-390	1	417343914
PWB	R6040	TRIM R	N06HR1KBC	1	5210258
PWB	R6041	TRIM R	N06HR1KBC	1	5210258
PWB	R6042	TRIM R	N06HR1KBC	1	5210258
PWB	R6043	TRIM R	N06HR1KBC	1	5210258
PWB	R6044	TRIM R	N06HR1KBC	1	5210258
PWB	R6050	CARBON R	R16J-3.9K	1	417343924
PWB	R6051	CARBON R	R16J-3.9K	1	417343924
PWB	R6052	CARBON R	R16J-3.9K	1	417343924
PWB	R6053	CARBON R	R16J-3.9K	1	417343924
PWB	R6054	CARBON R	R16J-3.9K	1	417343924
PWB	R6070	NF CARBON R	R25J-110	1	415471114
PWB	R6071	NF CARBON R	R25J-110	1	415471114
PWB	R6072	NF CARBON R	R25J-110	1	415471114
PWB	R6073	NF CARBON R	R25J-110	1	415471114
PWB	R6074	NF CARBON R	R25J-110	1	415471114
PWB	R6080	NF CARBON R	R25J-2.2	1	415470224
PWB	R6081	NF CARBON R	R25J-2.2	1	415470224
PWB	R6082	NF CARBON R	R25J-2.2	1	415470224
PWB	R6083	NF CARBON R	R25J-2.2	1	415470224
PWB	R6084	NF CARBON R	R25J-2.2	1	415470224
PWB	R6090	NF CARBON R	R25J-2.2	1	415470224
PWB	R6091	NF CARBON R	R25J-2.2	1	415470224
PWB	R6092	NF CARBON R	R25J-2.2	1	415470224
PWB	R6093	NF CARBON R	R25J-2.2	1	415470224
PWB	R6094	NF CARBON R	R25J-2.2	1	415470224
PWB	R6100	CEMENT R	RSS2WK-0.22	1	4800071
PWB	R6100 or	OTHER R	RGC22-0.22 OHMK	(1)	4000131
PWB	R6100 or	METAL PR	MPC708-2WK-0.22	(1)	4500027
PWB	R6101	CEMENT R	RSS2WK-0.22	1	4800071
PWB	R6101 or	OTHER R	RGC22-0.22 OHMK	(1)	4000131
PWB	R6101 or	METAL PR	MPC708-2WK-0.22	(1)	4500027
PWB	R6102	CEMENT R	RSS2WK-0.22	1	4800071
PWB	R6102 or	OTHER R	RGC22-0.22 OHMK	(1)	4000131
PWB	R6102 or	METAL PR	MPC708-2WK-0.22	(1)	4500027
PWB	R6103	CEMENT R	RSS2WK-0.22	1	4800071

PWB	R6103 or	OTHER R	RGC22-0.22 OHMK	(1)	4000131
PWB	R6103 or	METAL PR	MPC708-2WK-0.22	(1)	4500027
PWB	R6104	CEMENT R	RSS2WK-0.22	1	4800071
PWB	R6104 or	OTHER R	RGC22-0.22 OHMK	(1)	4000131
PWB	R6104 or	METAL PR	MPC708-2WK-0.22	(1)	4500027
PWB	R6140	CARBON R	R16J-22K	1	417342234
PWB	R6141	CARBON R	R16J-22K	1	417342234
PWB	R6142	CARBON R	R16J-22K	1	417342234
PWB	R6143	CARBON R	R16J-22K	1	417342234
PWB	R6144	CARBON R	R16J-22K	1	417342234
PWB	R6150	CARBON R	R16J-12K	1	417341234
PWB	R6151	CARBON R	R16J-12K	1	417341234
PWB	R6152	CARBON R	R16J-12K	1	417341234
PWB	R6153	CARBON R	R16J-12K	1	417341234
PWB	R6154	CARBON R	R16J-12K	1	417341234
PWB	R6160	CARBON R	R16J-33K	1	417343334
PWB	R6161	CARBON R	R16J-33K	1	417343334
PWB	R6162	CARBON R	R16J-33K	1	417343334
PWB	R6163	CARBON R	R16J-33K	1	417343334
PWB	R6164	CARBON R	R16J-33K	1	417343334
PWB	R6170	CARBON R	R16J-47K	1	417344734
PWB	R6171	CARBON R	R16J-47K	1	417344734
PWB	R6172	CARBON R	R16J-47K	1	417344734
PWB	R6173	CARBON R	R16J-47K	1	417344734
PWB	R6174	CARBON R	R16J-47K	1	417344734
PWB	R6180	CARBON R	R16J-47K	1	417344734
PWB	R6181	CARBON R	R16J-47K	1	417344734
PWB	R6182	CARBON R	R16J-47K	1	417344734
PWB	R6183	CARBON R	R16J-47K	1	417344734
PWB	R6184	CARBON R	R16J-47K	1	417344734
PWB	R6190	CARBON R	R16J-330K	1	417343344
PWB	R6191	CARBON R	R16J-330K	1	417343344
PWB	R6192	CARBON R	R16J-330K	1	417343344
PWB	R6193	CARBON R	R16J-330K	1	417343344
PWB	R6194	CARBON R	R16J-330K	1	417343344
PWB	R6230	METAL R	RNU1WCJ-8.2	1	453630824
PWB	R6231	METAL R	RNU1WCJ-8.2	1	453630824
PWB	R6232	METAL R	RNU1WCJ-8.2	1	453630824
PWB	R6233	METAL R	RNU1WCJ-8.2	1	453630824
PWB	R6234	METAL R	RNU1WCJ-8.2	1	453630824
PWB	R6306	CARBON R	R16J-10K	1	417341034
PWB	R6307	CARBON R	R16J-2.2K	1	417342224
PWB	R6308	CARBON R	R16J-4.7K	1	417344724
PWB	R6380	RESISTOR	PTFL04BF471Q2N34B0 (80)	1	4000217
PWB	R6601	CARBON R	R16J-1K	1	417341024
PWB	R6602	CARBON R	R16J-1K	1	417341024
PWB	R6603	CARBON R	R16J-1K	1	417341024
PWB	R6701	CARBON R	R16J-22K	1	417342234
PWB	R6702	CARBON R	R16J-10K	1	417341034
PWB	R6704	CARBON R	R16J-47K	1	417344734
PWB	R6706	CARBON R	R16J-220K	1	417342244
PWB	R6708	CARBON R	R16J-33K	1	417343334
PWB	R6709	CARBON R	R16J-5.6K	1	417345624
PWB	R6710	CARBON R	R16J-12K	1	417341234
PWB	R6850	METAL O R	RS1/2WBJ-390	1	443523914

PWB	R6851	METAL O R	RS1/2WBJ-390	1	443523914	
PWB	R6902	CARBON R	R16J-1K	1	417341024	
PWB	RL6901	RELAY SW	NRL-1P5A-DC12-102	1	25065526	
PWB	RL6901 or	RELAY	NRL-1P5A-DC12-127	(1)	25065561	
PWB	RL6901 or	RELAY	NRL-1P5A-DC12-096	(1)	25065515	
PWB	RL6901 or	RELAY	NRL-1P10A-DC12-093	(1)	25065508	
PWB	RL6902	RELAY SW	NRL-1P5A-DC12-102	1	25065526	
PWB	RL6902 or	RELAY	NRL-1P5A-DC12-127	(1)	25065561	
PWB	RL6902 or	RELAY	NRL-1P5A-DC12-096	(1)	25065515	
PWB	RL6902 or	RELAY	NRL-1P10A-DC12-093	(1)	25065508	
PWB	RL901	RELAY SW	NRL-1P5A-DC12-102	1	25065526	!
PWB	RL901 or	RELAY	NRL-1P5A-DC12-127	(1)	25065561	!
PWB	RL901 or	RELAY	NRL-1P5A-DC12-096	(1)	25065515	!
PWB	RL901 or	RELAY	NRL-1P10A-DC12-093	(1)	25065508	!
PWB	F6901A	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F6901B	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F6902A	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F6902B	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F901A	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F901B	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F901C	LABEL	LABEL	1	29360842	
PWB	F903A	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F903B	FUSE HOL	NSCT-1P2031	1	25052133	!
PWB	F903C	LABEL	5A/125V	1	29360462	
PWB	J010	CRIMP AS	CRIMP AS	1	2069925149UL	
PWB	J011	CRIMP AS	CRIMP AS	1	2069925226UL	
PWB	JL6402A	WIRE HOL	NSCT-3P874	1	25051087	
PWB	JL6402B	WIRE HOL	NSCT-3P874	1	25051087	
PWB	JL6803A	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL6804A	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL6805A	WIRE HOL	NSCT-4P895	1	25051108	
PWB	JL6951A	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL6951B	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL6952A	WIRE HOL	NSCT-5P896	1	25051109	
PWB	JL6952B	WIRE HOL	NSCT-5P896	1	25051109	
PWB	P206A	PLUG	NPLG-14P666	1	25055710	
PWB	P6000	PLUG	NPLG-5P0960	1	25056010	
PWB	P6001	PLUG	NPLG-5P0960	1	25056010	
PWB	P6002	PLUG	NPLG-5P0960	1	25056010	
PWB	P6003	PLUG	NPLG-5P0960	1	25056010	
PWB	P6004	PLUG	NPLG-5P0960	1	25056010	
PWB	P6011	PLUG	NPLG-9P0964	1	25056014	
PWB	P6072	TRM	NTM-1P233(M1969)	1	25060302	
PWB	P6072A	TRM	NTM-1P232(M1700)	1	25060301	
PWB	P6073A	TRM	NTM-1P232(M1700)	1	25060301	
PWB	P6080	PLUG	NPLG-2P29	1	25055038	
PWB	P6081	PLUG	NPLG-2P29	1	25055038	
PWB	P6082	PLUG	NPLG-2P29	1	25055038	
PWB	P6083	PLUG	NPLG-2P29	1	25055038	
PWB	P6084	PLUG	NPLG-2P29	1	25055038	
PWB	P6301	PLUG	NPLG-2P29	1	25055038	
PWB	P6380	SHLD CASE	(THERMISTOR)	1	27225154A	
PWB	P6801	WS CLAMP	CP-2S	1	260226	
PWB	P6903	BUS BAR	BBL25	1	27141806	
PWB	P6906	RETAINER	KANAGU	1	27141059	

PWB	P6907	TRM(SCREW)	NEGITANSI M3	1	25065425	
PWB	P6931	PLUG	NPLG-15P667	1	25055711	
PWB	P801B	SOCKET	NSCT-14P1029	1	25051239	
PWB	P901A	PLUG	NPLG-2P631	1	25055675	
PWB	P902	SOCKET	NSCT-2P1358	1	25051571	!
PWB	P902 or	AC OUTLET	AC-181-UL-11V	(1)	25053030	!
PWB	P911	CRIMP AS	CRIMP AS	1	2069943259UL	
PWB	P912	CRIMP AS	CRIMP AS	1	2069943224UL	
PWB	P931	PLUG	NPLG-5P657	1	25055701	
PWB	P931A	SOCKET	NSCT-5P1020	1	25051230	

U17	POWER AMPLIFIER PC BOARD (NAAF-7875-2B)
U18	TERMINAL PC BOARD (NAPS-7876-2B)
U19	POWER SUPPLY PC BOARD (NAPS-7877-2B)
U20	TERMINAL PC BOARD (NAPS-7878-2B)
U23	HOLDER PC BOARD (NAPS-7881-2B)
U25	TERMINAL PC BOARD (NAETC-7884-2B)
U26	THERMAL SENSOR PC BOARD (NAETC-7856-2B)

<Note> The parts of each PC board are indicated collectively.

	CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO.	REMARKS
PWB	U281	PHT CP	TORX179L	1	24120101	
PWB	Q201	TR	RN1241-A	1	2213631	
PWB	Q201 or	TR	RN1241-B	(1)	2213632	
PWB	Q202	TR	RN1241-A	1	2213631	
PWB	Q202 or	TR	RN1241-B	(1)	2213632	
PWB	Q203	IC	LA7956	1	22241759	
PWB	Q204	TR	KTA1267-GR	1	2215995	
PWB	Q204 or	TR	2SA933S-R	(1)	2213354	
PWB	Q205	TR	KRA102M	1	2215770	
PWB	Q205 or	TR	DTA114ES	(1)	2213510	
PWB	Q206	TR	KRA102M	1	2215770	
PWB	Q206 or	TR	DTA114ES	(1)	2213510	
PWB	Q281	IC	74HCU04F	1	222740046R2	
PWB	Q5000	TR	KTC3200-BL	1	2215896	
PWB	Q5000 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q5000 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q5000 or	TR	2SC1845-E	(1)	2211733	
PWB	Q5001	TR	KTC3200-BL	1	2215896	
PWB	Q5001 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q5001 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q5001 or	TR	2SC1845-E	(1)	2211733	
PWB	Q5002	TR	KTC3200-BL	1	2215896	
PWB	Q5002 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q5002 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q5002 or	TR	2SC1845-E	(1)	2211733	
PWB	Q5003	TR	KTC3200-BL	1	2215896	
PWB	Q5003 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q5003 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q5003 or	TR	2SC1845-E	(1)	2211733	
PWB	Q5004	TR	KTC3200-BL	1	2215896	
PWB	Q5004 or	TR	2SC1775A-E	(1)	2210755	
PWB	Q5004 or	TR	2SC1775A-F	(1)	2210756	
PWB	Q5004 or	TR	2SC1845-E	(1)	2211733	
PWB	Q5010	TR	KTC3200-BL	1	2215896	
PWB	Q5010 or	TR	2SC1775A-E	(1)	2210755	

PWB	Q5010 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5010 or	TR	2SC1845-E	(1)	2211733
PWB	Q5011	TR	KTC3200-BL	1	2215896
PWB	Q5011 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5011 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5011 or	TR	2SC1845-E	(1)	2211733
PWB	Q5012	TR	KTC3200-BL	1	2215896
PWB	Q5012 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5012 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5012 or	TR	2SC1845-E	(1)	2211733
PWB	Q5013	TR	KTC3200-BL	1	2215896
PWB	Q5013 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5013 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5013 or	TR	2SC1845-E	(1)	2211733
PWB	Q5014	TR	KTC3200-BL	1	2215896
PWB	Q5014 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5014 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5014 or	TR	2SC1845-E	(1)	2211733
PWB	Q5030	TR	KTA1024-Y	1	2215844
PWB	Q5030 or	TR	KTA1024-O	(1)	2215843
PWB	Q5030 or	TR	2SA949-Y	(1)	2211354
PWB	Q5030 or	TR	2SA949-O	(1)	2211353
PWB	Q5031	TR	KTA1024-Y	1	2215844
PWB	Q5031 or	TR	KTA1024-O	(1)	2215843
PWB	Q5031 or	TR	2SA949-Y	(1)	2211354
PWB	Q5031 or	TR	2SA949-O	(1)	2211353
PWB	Q5032	TR	KTA1024-Y	1	2215844
PWB	Q5032 or	TR	KTA1024-O	(1)	2215843
PWB	Q5032 or	TR	2SA949-Y	(1)	2211354
PWB	Q5032 or	TR	2SA949-O	(1)	2211353
PWB	Q5033	TR	KTA1024-Y	1	2215844
PWB	Q5033 or	TR	KTA1024-O	(1)	2215843
PWB	Q5033 or	TR	2SA949-Y	(1)	2211354
PWB	Q5033 or	TR	2SA949-O	(1)	2211353
PWB	Q5034	TR	KTA1024-Y	1	2215844
PWB	Q5034 or	TR	KTA1024-O	(1)	2215843
PWB	Q5034 or	TR	2SA949-Y	(1)	2211354
PWB	Q5034 or	TR	2SA949-O	(1)	2211353
PWB	Q5040	TR	KTC3206-Y	1	2215854
PWB	Q5040 or	TR	KTC3206-O	(1)	2215853
PWB	Q5040 or	TR	2SC2229-Y	(1)	2211634
PWB	Q5040 or	TR	2SC2229-O	(1)	2211633
PWB	Q5041	TR	KTC3206-Y	1	2215854
PWB	Q5041 or	TR	KTC3206-O	(1)	2215853
PWB	Q5041 or	TR	2SC2229-Y	(1)	2211634
PWB	Q5041 or	TR	2SC2229-O	(1)	2211633
PWB	Q5042	TR	KTC3206-Y	1	2215854
PWB	Q5042 or	TR	KTC3206-O	(1)	2215853
PWB	Q5042 or	TR	2SC2229-Y	(1)	2211634
PWB	Q5042 or	TR	2SC2229-O	(1)	2211633
PWB	Q5043	TR	KTC3206-Y	1	2215854
PWB	Q5043 or	TR	KTC3206-O	(1)	2215853
PWB	Q5043 or	TR	2SC2229-Y	(1)	2211634
PWB	Q5043 or	TR	2SC2229-O	(1)	2211633
PWB	Q5044	TR	KTC3206-Y	1	2215854

PWB	Q5044 or	TR	KTC3206-O	(1)	2215853
PWB	Q5044 or	TR	2SC2229-Y	(1)	2211634
PWB	Q5044 or	TR	2SC2229-O	(1)	2211633
PWB	Q5050	TR	KTC3200-BL	1	2215896
PWB	Q5050 or	TR	KTC3200-GR	(1)	2215895
PWB	Q5050 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5050 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5050 or	TR	2SC1845-E	(1)	2211733
PWB	Q5050 or	TR	2SC1845-F	(1)	2211732
PWB	Q5051	TR	KTC3200-BL	1	2215896
PWB	Q5051 or	TR	KTC3200-GR	(1)	2215895
PWB	Q5051 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5051 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5051 or	TR	2SC1845-E	(1)	2211733
PWB	Q5051 or	TR	2SC1845-F	(1)	2211732
PWB	Q5052	TR	KTC3200-BL	1	2215896
PWB	Q5052 or	TR	KTC3200-GR	(1)	2215895
PWB	Q5052 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5052 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5052 or	TR	2SC1845-E	(1)	2211733
PWB	Q5052 or	TR	2SC1845-F	(1)	2211732
PWB	Q5053	TR	KTC3200-BL	1	2215896
PWB	Q5053 or	TR	KTC3200-GR	(1)	2215895
PWB	Q5053 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5053 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5053 or	TR	2SC1845-E	(1)	2211733
PWB	Q5053 or	TR	2SC1845-F	(1)	2211732
PWB	Q5054	TR	KTC3200-BL	1	2215896
PWB	Q5054 or	TR	KTC3200-GR	(1)	2215895
PWB	Q5054 or	TR	2SC1775A-E	(1)	2210755
PWB	Q5054 or	TR	2SC1775A-F	(1)	2210756
PWB	Q5054 or	TR	2SC1845-E	(1)	2211733
PWB	Q5054 or	TR	2SC1845-F	(1)	2211732
PWB	Q6931	IC(REGURATOR)	78057HF(TA78057S)	1	222780574TOS
PWB	D5000	ZENER D	MTZJ5.6B	1	224470562
PWB	D5000 or	ZENER D	DZ-5.6BSB	(1)	224850562
PWB	D5001	ZENER D	MTZJ5.6B	1	224470562
PWB	D5001 or	ZENER D	DZ-5.6BSB	(1)	224850562
PWB	D5002	ZENER D	MTZJ5.6B	1	224470562
PWB	D5002 or	ZENER D	DZ-5.6BSB	(1)	224850562
PWB	D5003	ZENER D	MTZJ5.6B	1	224470562
PWB	D5003 or	ZENER D	DZ-5.6BSB	(1)	224850562
PWB	D5004	ZENER D	MTZJ5.6B	1	224470562
PWB	D5004 or	ZENER D	DZ-5.6BSB	(1)	224850562
PWB	D6600	DIODE	1SS133	1	223163
PWB	D6600 or	DIODE	1SS270A	(1)	223205
PWB	D6600 or	DIODE	WG713A	(1)	223222
PWB	D6600 or	DIODE	1N4148M	(1)	223273
PWB	D6601	DIODE	1SS133	1	223163
PWB	D6601 or	DIODE	1SS270A	(1)	223205
PWB	D6601 or	DIODE	WG713A	(1)	223222
PWB	D6601 or	DIODE	1N4148M	(1)	223273
PWB	D6604	DIODE	1SS133	1	223163
PWB	D6604 or	DIODE	1SS270A	(1)	223205
PWB	D6604 or	DIODE	WG713A	(1)	223222

PWB	D6604 or	DIODE	1N4148M	(1)	223273
PWB	D6932	DIODE	RL1N4003	1	22380260
PWB	D6932 or	DIODE	GP104003E	(1)	22380035
PWB	D6933	DIODE	RL1N4003	1	22380260
PWB	D6933 or	DIODE	GP104003E	(1)	22380035
PWB	L281	CHOKE COIL	NCH-1452 220K	1	233454K220
PWB	L281 or	CHOKE COIL	NCH-1561 220K	(1)	233526K220T
PWB	L282	CHOKE COIL	NCH-1452 220K	1	233454K220
PWB	L282 or	CHOKE COIL	NCH-1561 220K	(1)	233526K220T
PWB	L283	CHOKE COIL	NCH-1452 022M	1	233454M022
PWB	L283 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T
PWB	C201	VR C	CE04W50V-2.2M(VR)	1	394680227
PWB	C201 or	ELECT C	CE04W50V2.2M(SC)	(1)	394780227
PWB	C202	VR C	CE04W50V-2.2M(VR)	1	394680227
PWB	C202 or	ELECT C	CE04W50V2.2M(SC)	(1)	394780227
PWB	C203	VR C	CE04W16V-470M(VR)	1	394644717
PWB	C203 or	ELECT C	CE04W16V470M(SC)	(1)	394744717
PWB	C204	VR C	CE04W50V-2.2M(VR)	1	394680227
PWB	C204 or	ELECT C	CE04W50V2.2M(SC)	(1)	394780227
PWB	C205	VR C	CE04W16V-470M(VR)	1	394644717
PWB	C205 or	ELECT C	CE04W16V470M(SC)	(1)	394744717
PWB	C217	VR C	CE04W50V-2.2M(VR)	1	394680227
PWB	C217 or	ELECT C	CE04W50V2.2M(SC)	(1)	394780227
PWB	C220	CERA C	CK45F50V-223Z	1	335622230
PWB	C221	VR C	CE04W16V-47M(VR)	1	394644707
PWB	C221 or	ELECT C	CE04W16V47M(SC)	(1)	394744707
PWB	C222	CERA C	CK45F50V-223Z	1	335622230
PWB	C227	CERA C	CK45F50V-223Z	1	335622230
PWB	C281	CERA C	CK45F50V-223Z	1	335622230
PWB	C282	CERA C	CC45SL50V-101J	1	345021014
PWB	C283	CERA C	CK45F50V-223Z	1	335622230
PWB	C284	CERA C	CC45SL50V-080D	1	345020802
PWB	C285	VR C	CE04W6.3V-47M(VR)	1	394624707
PWB	C286	CERA C	CK45F50V-223Z	1	335622230
PWB	C287	CERA C	CK45F50V-223Z	1	335622230
PWB	C288	VR C	CE04W6.3V-47M(VR)	1	394624707
PWB	C5000	TF C	ECQ-B50V-101K	1	374721015
PWB	C5001	TF C	ECQ-B50V-101K	1	374721015
PWB	C5002	TF C	ECQ-B50V-101K	1	374721015
PWB	C5003	TF C	ECQ-B50V-101K	1	374721015
PWB	C5004	TF C	ECQ-B50V-101K	1	374721015
PWB	C5010	VX C	CE04W16V-22M(VX)	1	393342207
PWB	C5011	VX C	CE04W16V-22M(VX)	1	393342207
PWB	C5012	VX C	CE04W16V-22M(VX)	1	393342207
PWB	C5013	VX C	CE04W16V-22M(VX)	1	393342207
PWB	C5014	VX C	CE04W16V-22M(VX)	1	393342207
PWB	C5020	VR C	CE04W50V-10M(VR)	1	394681007
PWB	C5021	VR C	CE04W50V-10M(VR)	1	394681007
PWB	C5022	VR C	CE04W50V-10M(VR)	1	394681007
PWB	C5023	VR C	CE04W50V-10M(VR)	1	394681007
PWB	C5024	VR C	CE04W50V-10M(VR)	1	394681007
PWB	C5040	VX C	CE04W16V-220M(VX)	1	393342217
PWB	C5041	VX C	CE04W16V-220M(VX)	1	393342217
PWB	C5042	VX C	CE04W16V-100M(VX)	1	393341017
PWB	C5043	VX C	CE04W16V-100M(VX)	1	393341017

PWB	C5044	VX C	CE04W16V-100M(VX)	1	393341017
PWB	C5050	VR C	CE04W50V-47M(VR)	1	394684707
PWB	C5051	VR C	CE04W50V-47M(VR)	1	394684707
PWB	C5052	VR C	CE04W50V-47M(VR)	1	394684707
PWB	C5053	VR C	CE04W50V-47M(VR)	1	394684707
PWB	C5054	VR C	CE04W50V-47M(VR)	1	394684707
PWB	C5080	CERA C	CC45SL50V-040D	1	345020402
PWB	C5080 or	CERA C	CC45SL50V-040C	(1)	345020401
PWB	C5081	CERA C	CC45SL50V-040D	1	345020402
PWB	C5081 or	CERA C	CC45SL50V-040C	(1)	345020401
PWB	C5082	CERA C	CC45SL50V-040D	1	345020402
PWB	C5082 or	CERA C	CC45SL50V-040C	(1)	345020401
PWB	C5083	CERA C	CC45SL50V-040D	1	345020402
PWB	C5083 or	CERA C	CC45SL50V-040C	(1)	345020401
PWB	C5084	CERA C	CC45SL50V-040D	1	345020402
PWB	C5084 or	CERA C	CC45SL50V-040C	(1)	345020401
PWB	C5090	CERA C	CC45SL50V-101J	1	345021014
PWB	C5091	CERA C	CC45SL50V-101J	1	345021014
PWB	C5092	CERA C	CC45SL50V-101J	1	345021014
PWB	C5093	CERA C	CC45SL50V-101J	1	345021014
PWB	C5094	CERA C	CC45SL50V-101J	1	345021014
PWB	C5100	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5101	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5102	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5103	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5104	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5110	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5111	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5112	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5113	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C5114	VR C	CE04W100V-10M(VR)	1	394691007
PWB	C6600	TF C	ECQ-B50V-103J	1	374721034
PWB	C6601	CERA C	CK45F50V-103Z	1	335621030
PWB	C6604	TF C	ECQ-B50V-103J	1	374721034
PWB	C6931	VR C	CE04W25V-1000M(VR)	1	394651027S
PWB	C6932	CERA C	CK45F50V-103Z	1	335621030
PWB	C6933	VR C	CE04W16V-10M(VR)	1	394641007
PWB	C9513	CERA C	CK45F50V-223Z	1	335622230
PWB	R201	CARBON R	R16J-75	1	417347504
PWB	R202	CARBON R	R16J-75	1	417347504
PWB	R203	CARBON R	R16J-75	1	417347504
PWB	R204	CARBON R	R16J-100K	1	417341044
PWB	R205	CARBON R	R16J-75	1	417347504
PWB	R206	CARBON R	R16J-75	1	417347504
PWB	R207	CARBON R	R16J-680K	1	417346844
PWB	R208	CARBON R	R16J-680K	1	417346844
PWB	R209	CARBON R	R16J-680K	1	417346844
PWB	R210	CARBON R	R16J-220	1	417342214
PWB	R223	CARBON R	R16J-100K	1	417341044
PWB	R224	CARBON R	R16J-100K	1	417341044
PWB	R230	CARBON R	R16J-680K	1	417346844
PWB	R231	CARBON R	R16J-75	1	417347504
PWB	R281	CARBON R	R16J-75	1	417347504
PWB	R282	CARBON R	R16J-470	1	417344714
PWB	R284	CARBON R	R16J-10K	1	417341034

PWB	R5000	CARBON R	R16J-1K	1	417341024
PWB	R5001	CARBON R	R16J-1K	1	417341024
PWB	R5002	CARBON R	R16J-1K	1	417341024
PWB	R5003	CARBON R	R16J-1K	1	417341024
PWB	R5004	CARBON R	R16J-1K	1	417341024
PWB	R5010	CARBON R	R16J-56K	1	417345634
PWB	R5011	CARBON R	R16J-56K	1	417345634
PWB	R5012	CARBON R	R16J-56K	1	417345634
PWB	R5013	CARBON R	R16J-56K	1	417345634
PWB	R5014	CARBON R	R16J-56K	1	417345634
PWB	R5020	CARBON R	R16J-330	1	417343314
PWB	R5021	CARBON R	R16J-330	1	417343314
PWB	R5022	CARBON R	R16J-330	1	417343314
PWB	R5023	CARBON R	R16J-330	1	417343314
PWB	R5024	CARBON R	R16J-330	1	417343314
PWB	R5030	CARBON R	R16J-56K	1	417345634
PWB	R5031	CARBON R	R16J-56K	1	417345634
PWB	R5032	CARBON R	R16J-56K	1	417345634
PWB	R5033	CARBON R	R16J-56K	1	417345634
PWB	R5034	CARBON R	R16J-56K	1	417345634
PWB	R5040	CARBON R	R16J-2.2K	1	417342224
PWB	R5041	CARBON R	R16J-2.2K	1	417342224
PWB	R5042	CARBON R	R16J-2.2K	1	417342224
PWB	R5043	CARBON R	R16J-2.2K	1	417342224
PWB	R5044	CARBON R	R16J-2.2K	1	417342224
PWB	R5050	CARBON R	R16J-4.7K	1	417344724
PWB	R5051	CARBON R	R16J-4.7K	1	417344724
PWB	R5052	CARBON R	R16J-4.7K	1	417344724
PWB	R5053	CARBON R	R16J-4.7K	1	417344724
PWB	R5054	CARBON R	R16J-4.7K	1	417344724
PWB	R5060	CARBON R	R16J-1.2K	1	417341224
PWB	R5061	CARBON R	R16J-1.2K	1	417341224
PWB	R5062	CARBON R	R16J-1.2K	1	417341224
PWB	R5063	CARBON R	R16J-1.2K	1	417341224
PWB	R5064	CARBON R	R16J-1.2K	1	417341224
PWB	R5070	CARBON R	R16J-560	1	417345614
PWB	R5071	CARBON R	R16J-560	1	417345614
PWB	R5072	CARBON R	R16J-560	1	417345614
PWB	R5073	CARBON R	R16J-560	1	417345614
PWB	R5074	CARBON R	R16J-560	1	417345614
PWB	R5080	CARBON R	R16J-3.3K	1	417343324
PWB	R5081	CARBON R	R16J-3.3K	1	417343324
PWB	R5082	CARBON R	R16J-3.3K	1	417343324
PWB	R5083	CARBON R	R16J-3.3K	1	417343324
PWB	R5084	CARBON R	R16J-3.3K	1	417343324
PWB	R5090	CARBON R	R16J-100K	1	417341044
PWB	R5091	CARBON R	R16J-100K	1	417341044
PWB	R5092	CARBON R	R16J-100K	1	417341044
PWB	R5093	CARBON R	R16J-100K	1	417341044
PWB	R5094	CARBON R	R16J-100K	1	417341044
PWB	R5100	CARBON R	R16J-100K	1	417341044
PWB	R5101	CARBON R	R16J-100K	1	417341044
PWB	R5102	CARBON R	R16J-100K	1	417341044
PWB	R5103	CARBON R	R16J-100K	1	417341044
PWB	R5104	CARBON R	R16J-100K	1	417341044

PWB	R5110	CARBON R	R16J-1K	1	417341024
PWB	R5111	CARBON R	R16J-1K	1	417341024
PWB	R5112	CARBON R	R16J-1K	1	417341024
PWB	R5113	CARBON R	R16J-1K	1	417341024
PWB	R5114	CARBON R	R16J-1K	1	417341024
PWB	R5130	CARBON R	R16J-18K	1	417341834
PWB	R5131	CARBON R	R16J-18K	1	417341834
PWB	R5132	CARBON R	R16J-18K	1	417341834
PWB	R5133	CARBON R	R16J-18K	1	417341834
PWB	R5134	CARBON R	R16J-18K	1	417341834
PWB	R5160	NF CARBON R	R25J-120	1	415471214
PWB	R5161	NF CARBON R	R25J-120	1	415471214
PWB	R5162	NF CARBON R	R25J-120	1	415471214
PWB	R5163	NF CARBON R	R25J-120	1	415471214
PWB	R5164	NF CARBON R	R25J-120	1	415471214
PWB	R5170	NF CARBON R	R25J-120	1	415471214
PWB	R5171	NF CARBON R	R25J-120	1	415471214
PWB	R5172	NF CARBON R	R25J-120	1	415471214
PWB	R5173	NF CARBON R	R25J-120	1	415471214
PWB	R5174	NF CARBON R	R25J-120	1	415471214
PWB	R5180	NF CARBON R	R25J-10	1	415471004
PWB	R5181	NF CARBON R	R25J-10	1	415471004
PWB	R5182	NF CARBON R	R25J-10	1	415471004
PWB	R5183	NF CARBON R	R25J-10	1	415471004
PWB	R5184	NF CARBON R	R25J-10	1	415471004
PWB	R5190	NF CARBON R	R25J-10	1	415471004
PWB	R5191	NF CARBON R	R25J-10	1	415471004
PWB	R5192	NF CARBON R	R25J-10	1	415471004
PWB	R5193	NF CARBON R	R25J-10	1	415471004
PWB	R5194	NF CARBON R	R25J-10	1	415471004
PWB	R6935	METAL O R	RS2WBJ-120	1	441721214F
PWB	R9501	METAL R	RNU1/2WCJ-1	1	453530104
PWB	R9502	METAL R	RNU1/2WCJ-0.47	1	453534794
PWB	R9503	METAL R	RNU1/2WCJ-0.22	1	453532294
PWB	R9521	METAL R	RNU1/2WCJ-3.9	1	453530394
PWB	RL6600	RELAY	NRL-2P5A-DC24-129	1	25065563
PWB	RL6600 or	RELAY	NRL-2P5A-DC24-142	(1)	25065586
PWB	RL6600 or	RELAY	NRL-2P5A-DC24-098	(1)	25065517
PWB	RL6601	RELAY	NRL-2P5A-DC24-129	1	25065563
PWB	RL6601 or	RELAY	NRL-2P5A-DC24-142	(1)	25065586
PWB	RL6601 or	RELAY	NRL-2P5A-DC24-098	(1)	25065517
PWB	RL6603	RELAY	NRL-2P5A-DC24-129	1	25065563
PWB	RL6603 or	RELAY	NRL-2P5A-DC24-142	(1)	25065586
PWB	RL6603 or	RELAY	NRL-2P5A-DC24-098	(1)	25065517
PWB	RL6604	RELAY	NRL-2P5A-DC24-129	1	25065563
PWB	RL6604 or	RELAY	NRL-2P5A-DC24-142	(1)	25065586
PWB	RL6604 or	RELAY	NRL-2P5A-DC24-098	(1)	25065517
PWB	JL6803B	SOCKET	NSCT-5P97	1	25050269
PWB	JL6804B	SOCKET	NSCT-5P97	1	25050269
PWB	JL6805B	SOCKET	NSCT-4P96	1	25050268
PWB	JL9501A	WIRE HOL	NSCT-7P898	1	25051111
PWB	JL9501B	WIRE HOL	NSCT-7P898	1	25051111
PWB	P201	JACK	NPJ-3PDYE158	1	25045299
PWB	P201 or	PIN JACK	NPJ-3PDYYY560	(1)	25045778
PWB	P202	JACK	NPJ-3PDYE158	1	25045299

PWB	P202 or	PIN JACK	NPJ-3PDYYY560	(1)	25045778
PWB	P206B	SOCKET	NSCT-14P1029	1	25051239
PWB	P281	PIN JACK	NPJ-1PDBL291	1	25045473
PWB	P281 or	PIN JACK	NPJ-1PDO554	(1)	25045772
PWB	P282	ST JACK	LGY2502-0200C	1	25045696
PWB	P306A	PLUG	NPLG-10P357	1	25055374
PWB	P410A	SOCKET	NSCT-10P1025	1	25051235
PWB	P411A	SOCKET	NSCT-10P1025	1	25051235
PWB	P5001	BUS BAR	BBL40	1	27141773
PWB	P6000A	SOCKET	NSCT-5P2185	1	25052288
PWB	P6001A	SOCKET	NSCT-5P2185	1	25052288
PWB	P6002A	SOCKET	NSCT-5P2185	1	25052288
PWB	P6003A	SOCKET	NSCT-5P2185	1	25052288
PWB	P6004A	SOCKET	NSCT-5P2185	1	25052288
PWB	P6011A	SOCKET	NSCT-9P2189	1	25052292
PWB	P6073	TRM	NTM-1P233(M1969)	1	25060302
PWB	P6800	TRM	NTM-8PDML254	1	25060323
PWB	P6800 or	TRM	NTM-8PDMR311	(1)	25060380
PWB	P6801	TRM	NTM-6PDML266	1	25060335
PWB	P6801 or	TRM	NTM-6PDMR312	(1)	25060381
PWB	P6931A	SOCKET	NSCT-15P1030	1	25051240
PWB	P7503B	SOCKET	NSCT-8P2138	1	25052241
PWB	P7503Bor	SOCKET	NSCT-8P1101	(1)	25051312
PWB	P7503Bor	SOCKET	NSCT-8P1841	(1)	25052054
PWB	P7503Bor	SOCKET	NSCT-8P1639	(1)	25051852

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